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Remixed, Remastered: Investigating Organizational Adaptation in Higher Music Education

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Investigating Organizational Adaptation in Higher Music Education

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by

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Abstract

Higher music education presents a unique opportunity to examine change within higher education due to the digital revolution in the music industry over the past two decades. The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry. This study was grounded in organizational adaptation theory, drawing upon nine well-established theories: population ecology, life cycles, strategic choice, isomorphism, symbolic action, resource dependence, cybernetics, and network theory. Critical concepts of the turbulent environment, environmental perception, and organizational adaptation strategy emerged from these theories. An organizational adaptation strategy typology consisting of five strategies; decentralization, generalization, specialization, formalization, and inaction; was additionally constructed to create a tool for the measurement and explanation of organizational behavior. Music leaders of accredited institutions and programs that grant four-year degrees (N = 570) were surveyed via email using a survey instrument I designed. This instrument contained 57 items created to measure environmental perception (EP), organizational adaptation strategy (OAS), and characteristics of the institutions and music leaders. Data were collected over a four-week period in February 2021 and produced a response rate of 18.4% (n = 100).

The most important result of this study was the observation that higher music education is undergoing a great generalization whereby organizational functions have dramatically expanded over the past five years. Furthermore, the environmental perception abilities of music units were found to be positively correlated with the total amount of organizational adaptation, indicating consistency with major tenants of organizational adaptation theory. These findings demonstrate that while expansionist trends in the field are promising for stakeholders, higher music education

must navigate the many pressures of a turbulent music industry environment while balancing unique organizational constraints within higher education. Finally, this study provides empirical evidence for furthering theoretical concepts of organizational adaptation in higher education at the single-discipline level.

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"When the student is ready, the master will appear" – This statement from a Zen master has proven extremely prophetic in my life. I have been rich in mentors, both on and off the stage. I can say with confidence that the experience of this doctoral program has been more deeply enriching and inspiring than I ever could have imagined. To the faculty and the university, I am forever grateful.

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Throughout this process, I have had the rare experience of simultaneously serving as both faculty and graduate student in different departments at the same university. I have been so fortunate to live within higher music education while studying it and my students, faculty colleagues, and fellow musicians have been tremendously influential to my perspectives on this field. I am grateful to all those in the Department of Music for their inspiration. Throughout my studies, the incredible faculty in the College of Education and Health Professionals has also been immeasurably inspiring – thank you for sharing your passion for higher education with me and imparting your perspectives, insights, and wisdom.

Finally, to all those in higher music education; may we strive to adapt and innovate on every level. Music has never needed it more.

Dedication

To my extraordinary wife, Erica. Thank you for supporting me in this endeavor wholeheartedly. Thank you for learning with me on this journey, for encouraging me through its challenges, and celebrating each small step. Thank you for making this a part of our shared experience, always listening to my ideas, and infinite, boundless support.

Also to my beautiful, miraculous little one – this is entirely for you.

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Chapter 1

Introduction

"As the present now will later be past, the order is rapidly fadin', And the first one now will later be last, for the times they are a-changin'" – Bob Dylan

Context of the Problem

Higher education exists in a nearly permanent state of change (Bastedo, Altbach, & Gumport, 2016; Bok, 2013; Buller, 2015; Christensen & Eyering, 2011; Thelin, 2011), and this change is a frequent topic of research for scholars in education, economics, public policy, and increasingly, popular media (DelBanco, 2012). The scale and pace of change in the early decades of the 21st century has brought significant paradigm shifts to every corner of the higher education enterprise placing burdens on traditional practices of teaching, research, and service (Bastedo et al., 2016; Bok, 2013; Buller, 2015; Christensen & Eyering, 2011; Manning, 2018; Thelin, 2011). Furthermore, monumental developments in technology, demographics, and globalization have come to challenge fundamental and foundational concepts in higher education such as cost and access (Grawe, 2018; Mettler, 2014; Wilder, 2013), higher education's role in society (Bok, 2013; DelBanco, 2012), the future of learning and knowledge creation (Bastedo et al., 2016; Bok, 2013; Owen-Smith, 2018), and contemporary student success (Christensen & Eyering, 2011; Kruger, 2019).

In this regard, higher education's saga in the modern age mirrors the kind of dramatic paradigm shifts observed in other economic sectors such as medicine, retail, manufacturing, and entertainment (Kruger, 2019). The connection between higher education and entertainment is particularly poignant: As the entertainment (or cultural) sector, encompassing music, film, literature, theater, and all other arts, has been redefined by radical technological change, higher education now stands on the same precipice; poised to face similar disruptions to its business

models, services, and social functions (Bok, 2013; Bueller, 2015; Christensen & Eyering, 2011; Fisher, 2004; Kruger, 2019; Owen-Smith, 2018; Tschmuck, 2017). This parallel has not gone unnoticed. As Carnegie Mellon professor Michael Smith (2020) writes in *The Atlantic*, "I fear that the changes in store for higher education are going to look a lot like the painful changes we've seen in retail, travel, news, and entertainment" (p. 1).

Though the dynamic state of higher education provides fertile ground for research at the national, system, and institutional levels (Bastedo et al., 2016; Bok, 2013; Bowen, 2011; Christensen & Eyering, 2011; Hilbun, 2013; Owen-Smith, 2018) the perspective of individual departments and single disciplines can provide a more nuanced and tangible framework to study change in the academic ecosystem (Birnbaum, 1988; Gmelch & Miskin, 2004; Manning, 2018; Posselt, 2016; Sorenson, 2007; Sporn, 1999). Drawing upon the connections between technological disruption in entertainment and in higher education, focusing on a discipline and an industry that has been profoundly reshaped by technology and its repercussions furnishes a window into higher education's adaptation to the 21st century world. The myriad technological changes over the last twenty years have reshaped few economic sectors as heavily as the music industry. Consequently, the academic institutions, units, and programs that prepare the next generation of these creative sector workers present a unique opportunity to examine academic change and one discipline's adaptation to its digital revolution. (Bennett, 2007; Fisher, 2004; Kruger, 2019; Young, 2018).

Research on higher music education is a relatively young field, however, Jørgensen (2010) argues that the acceleration of scholarship in this area since the year 2000 supports the conclusion that "research into higher music education has come of age" (p. 78) and should be regarded as a separate and mature field of research. The intersectional nature of higher music

education research canvases artistic, pedagogical, sociological, and administrative frameworks (Jørgensen, 2010), speaking to the interdisciplinary nature of music education, and the wider applicability of music and the arts as a lens to examine change (Kruger, 2019). Economist Alan Kruger, a former economic advisor to President Obama, is one of the most prominent economists and scholars to examine the music industry in detail and shed light not only on the recent technologically driven disruption, but also on potential challenges facing the next generation of musicians and music educators (Kruger, 2019). In stating "the music business is the canary in the coal mine for innovations" (Kruger, 2019, p. 6) he echoes Smith's (2020) insights and eloquently frames the importance of understanding the connections between the music industry, higher music education, and the reverberations felt by academic disciplines in sectors experiencing economic disruption.

The most pressing issue in the field of higher music education continues to be the influence of new economic models on 21st century musicians originating from the rise of digital music sharing and distribution circa 1999, and the effects of these models on three major concepts: (a) the preparation of music students for careers in the rapidly evolving, digitally driven music industry; (b) the evolution of post-secondary music education to reflect a globalized music industry and culturally diverse world; and (c) the reformation of music in higher education to align with, and more deeply integrate into, the music industry (Bartlett & Tolmie, 2018; Bennett, 2007; College Music Society [CMS], 2014; Kajikawa, 2019; Kardos, 2018; Morris, 2014; Myers, 2016; National Association of Schools of Music [NASM], 2005, 2007, 2009; Toscher, 2020; Tschmuck, 2017; Young, 2018). Therefore, a significant problem is understanding how higher music education is adapting to these changes in the music industry in order to meet the needs of its constituents and advance the discipline. Despite the preponderance

of research in the higher music education area (Jørgensen, 2010), an integrative approach combining the disciplines of music business, higher education, and organizational studies has not yet been applied to this problem, and thus, this study intended to adopt a novel approach to the field.

Purpose of the Study

The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry. Higher music education (Jørgensen, 2010) in this study refers to degree-granting, post-secondary programs in music, traditionally housed as either departments within colleges or universities, or independent, music-only institutions (NASM, 2020). This study was grounded in the framework of organizational adaptation from which concepts of strategy were distilled. Organizational adaptation spans organizational and higher education disciplines and consists of multiple well-defined theories (Aldrige, 1979; Bastedo, 2012; Birnbaum, 1988; Cameron, 1984; Child, 1972; Hilbun, 2013; Manning, 2018; Sporn, 1999). In this study, nine organizational adaptation theories were synthesized to create an organizational adaptation strategy typology spectrum to assess the actions of higher music education programs. Music program leaders were surveyed to ascertain their employment of specific organizational adaptation strategies and to gain an understanding of how their programs acquire information about their music industry environment; a cornerstone of organizational adaptation theory (Aldrich, 1979).

Research Questions

This study addressed the following research questions:

1. What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?

2. How effectively do music programs perceive their environment?
3. What is the relationship between organizational adaptation strategy and environmental perception?
4. How do music programs' organizational adaptation strategies and environmental perception vary by institutional and leader characteristics?

Definitions

Higher Music Education: All accredited, post-secondary, degree-granting programs in the music discipline. These programs grant a range of degrees including the Associate of Fine Arts, Associate Liberal Arts in Music, Bachelor of Music (B.M.), and Bachelor of Arts in Music (B.A.), as well as graduate degrees such as the Master of Music (M.M) and the Doctor of Musical Arts (D.M.A) (NASM, 2020; Jørgensen, 2010). Since this study only examined those institutions and programs granting Bachelor of Music degrees, Bachelor of Arts in Music degrees, and post-baccalaureate degrees, higher music education in this study refers exclusively to four-year programs.

Music Unit: Any academic unit whose primary discipline is music of any kind, type, or style. Music is unique among academic disciplines in that it can be embedded into a larger institution and take the form of a college, school or department, or it can be a stand-alone institution (NASM, 2020; Niezen, 2014; Sorensen, 2007). For the purposes of this study "music unit" refers to schools of music, colleges of music, or departments of music embedded into larger colleges or universities.

Music Leader: Highest ranking academic position presiding over a music unit; common positions are department chair, dean, or provost (Miezen, 2014; Sorensen, 2007).

Organizational Adaptation: The process by which an organization works to achieve balance with its environment (Aldrich, 1979; Cameron, 1984; Sporn 1999). A classic example would be a firm launching a new product to meet changing customer demand (Khandwall, 1977). In higher education, a college may employ budget cuts, fundraising, and new program development to adapt to an environmental challenge such as declining enrollment (Hilbun, 2013). This term and its applications to higher music education are further described in the literature review.

Organizational Adaptation Strategy: The integrated decisions, actions, or plans that organizations use to achieve balance with their environment (Aldridge, 1979, Cameron, 1984; Chaffee, 1985; Sporn, 1999). Organizational adaptation strategy in this study is catalogued along a spectrum consisting of five organizational adaptation strategies: decentralization, generalization, inaction, specialization, and formalization.

Music Industry: The collection of interlocking businesses consisting of the recorded music business, the live music business and the music publishing business (Kruger, 2019; Negus, 1998; Nordgård, 2018; Tschmuck, 2017). For readability, the terms "music industry" and "music business" are used interchangeably in this study. The music industry is also considered the external environment for higher music education (Khandwalla, 1978; Tschmuck, 2017; Young, 2018).

Musician: A person whose professional work is primarily in any segment of the music industry including but not limited to; performance, composition, education, business, retail, technology, production, or other broader music industry occupations (Siwek, 2018).

Digital Revolution: The confluence of technological change beginning in the late 1990s that dramatically altered the economic models of the music industry centering around digital recording, audio compression, and the internet (Fisher, 2004; Fairchild, 2016; Kruger, 2019;

Nordgård, 2018; Tschmuck, 2017). In this study, the current period of music history during and immediately following the digital revolution is referred to as the "digital era", "digital music industry" or "digital music economy".

Significance of the Study

This description of music industry-influenced change across higher music education holds great implications and value for the music discipline and its constituents across the music industry that are involved with, and invested in, higher education. Approaching this problem from the vantage point of organizational adaptation provides a contribution to theoretical constructs in the organizational studies field as they have been applied in the context of higher education. The ultimate goal of this study was to utilize the unique case of higher music education's response to the digital revolution to inform the study of change in the academic world.

As showcased in the literature review, despite the calls for reform in higher music education, music educators and music leaders, even those intimately involved in the program review and accreditation process, have little understanding of how the discipline as a whole has changed in response to the digital music industry (Bartlett & Tolmie, 2018; Bennet, 2007, 2016; CMS, 2014; Kardos, 2018; Miller et al., 2017; Myers, 2016; NASM, 2005; Sarath, Myers, & Campbell 2016; Tschmuck, 2017; Young, 2018), and therefore, each program and institution is operating relatively "blind" in the digital age. By including an assessment of how music programs and institutions learn about their music industry environment in this study, a major component of adaptation (Aldrich, 1979; Cameron, 1984; Khandwalla, 1978; Sporn 1999), music unit leaders and faculty can utilize this research as a benchmark for their information intake as it pertains to engagement with the wider music business.

Scholarship in higher music education frequently illuminates the difficulties in quantifying and tracking student success (Bartlett & Tolmie, 2018; Bennet, 2007, 2016; Creech, Papageorgi, Haddon, Potter, Morton, & Duffy, 2008; Harrison, & Grant, 2016). Data from this study provides a basis for future research on music student success in the digital age. This holds additional importance in relationship to the new National Academy of Recording Arts and Sciences (NARAS) mission components of increasing diversity in the music industry (National Academy of Recording Arts and Sciences [NARAS], 2019). Across higher education, scholars, institutional leaders, policymakers, and students are increasingly concerned about the value propositions of post-secondary education. Dollinger, Lodge, and Coates (2018) illustrate this concern from the students' perspective: "Now and continually into the future, students will be able to select universities on the basis of which university will provide the value propositions they personally think should be created for them" (p. 225). Increasingly for higher music education, this value will be based on how well they prepare students for the digital music era (Tschmuck, 2017; Young, 2018). This study provides a significant contribution to understanding this new world and guiding music educators, administrators, and institutions in construction of a 21st century higher music education paradigm to match the 21st century digital music economy.

Utilizing an organizational adaptation lens for this study lent further significance to the project. Importantly, organizational scholarship in higher education has tended to focus on the environment and organizational design elements (Bastedo, 2012; Manning, 2018), and is notably void of research that unites environmental effects with "educational practice and work" (Bastedo, 2012, p. 11). This research was in essence a macro-study of music program innovation and since "all innovations involve organizational change" (Khandwalla, 1977, p. 562), a theoretical framework in the organization science setting provided a sound baseline for analysis.

Of notable theoretical interest, as organizational theories in higher education have predominantly advanced either large-scale perspectives (i.e. bureaucratic) or small-scale perspectives (i.e. psychological) (Khandwalla, 1978; Manning 2018), a "middle-scale" perspective that focuses on individual units of varying typology united by similar missions offers a productive contribution to contemporary theorists whose work increasingly centers around concepts of networks, distributed organizations, and the nature of organizational development in turbulent environments (Aldrich, 1979; Bastedo, 2012; Manning, 2018).

Bastedo (2012) further argues that despite a recent decline in popularity of organizational research in higher education, many foundational concepts in organizational science have their roots in tertiary education research and an organizational perspective is essential to addressing the challenges faced by higher education in the 21st century. A recent report by Mrig and Sanaghan (2018) on the future of higher education identified four paradoxes facing the higher education sector including the "decision making and governance models [that] are not supportive of rapid innovation", a major theme in organizational scholarship. Additionally, while Sporn (1999) articulated a theory of organizational adaptation for higher education *institutions*, she concluded that studies of organizational adaptation should be conducted at the program or discipline level. Echoing Sporn's (1999) conclusion, Bastedo (2012) advocates heavily for the significance of organizational research in higher education with the "desire to create theories that are nuanced and adaptive to the differences across subunits" (p. 7). Construction of an organizational adaptation typology spectrum as a measurement tool in the context of higher education provides a potential framework for future research in line with these acknowledged areas of needed refinement (Bastedo, 2012; Sporn, 1999). Furthermore, the organizational adaptation strategy typology spectrum provided an opportunity to further test established theories

in organizational adaptation and higher education research (Cameron, 1984). Therefore, this organizational study of higher music education is both unique in higher education organizational literature as well as in music education research providing contributions to each field (Aldrich, 1979; Bastedo, 2012; Birnbaum, 1988; Khandwalla, 1977; Manning, 2018; Sporn, 2019).

The implications of this study hold relevance far beyond the music discipline. As Kruger (2019) describes parallels between the music industry and the broader economy, painting a picture of higher music education's response to the music industry provides valuable insight to other disciplinary areas, especially those similarly dependent on intellectual property as coin-of-the-realm (Fisher, 2004). Findings from this study hold significance for future research in higher education that aims to assess and guide change: The challenges of the modern age show no signs of abatement for higher education (Bok, 2013) and each academic field will necessitate appropriate adaptations to remain both vibrant and relevant as the 21st century further unfolds (Bastedo, et al., 2016; DelBanco, 2012; Owen-Smith, 2018).

Theoretical Framework

This study adopted the organizational adaption framework utilized for decades to study change at the organizational level and focused on nine specific and well-established theories of organizational adaptation. Those theories were: population ecology (Aldrich, 1979), resource dependence (Pfeffer & Salancik, 1978), strategic choice (Child, 1972), life cycles (Cameron & Quinn, 1983), symbolic action (Pfeffer, 1981), cybernetics (Ashby, 1956; Birnbaum, 1988), network organizations (Powell, 1990), contingency theory (Donaldson, 1996; Lawrence & Lorsch, 1976), and institutional isomorphism (DiMaggio & Powell, 1983). Each theory is described in the literature review with particular consideration given to three emergent themes: (a) construction of an organizational adaptation strategy typology spectrum; (b) the response of

an organization to a turbulent environment; and (c) environmental perception; how an organization learns about its environment.

To establish the organizational adaptation framework as the tool for analysis and interpretation in this study of higher music education, the literature review also demonstrates the location of higher music education within the music industry environment, the turbulence of the music industry environment as a driver of organizational adaption (Emery & Trist, 1965), and a synthesized definition of organizational adaptation as it applies to higher music education.

Summary

The problem addressed in this study was the response of higher music education programs and institutions to dramatic technological and economic change in the music industry as a result of the digital revolution. This problem is contextualized within the significant disruptions and challenges facing higher education in the 21st century. The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry.

The study has significance in two main areas. First, results of this research hold practical significance for those within the music discipline and the music industry as a field-wide description of adaptation and the academic response to an industrial paradigm shift. Secondly, the data and interpretations from this study hold theoretical significance for higher education scholars as a measurement of organizational adaptation strategy in higher education at the single-discipline level.

Chapter 2

Review of Relevant Literature

The research presented in this literature review covers three primary areas encompassing multiple disciplines that intersect and overlap the topic of this study. The first area is organizational studies, specifically, the major theories of organizational adaptation that have been developed from several generations of research in corporate, governmental, non-profit, and educational settings. These theories provided the theoretical framework for the study and allowed for the conceptualization of constructs for organizational adaption and organizational adaptation strategy for higher music education. This body of research has its roots in mid-century management science and political theory and has produced large bodies of theoretical and applied scholarship in higher education over the past 70 years (Khandwalla, 1977; Manning, 2018; Sporn, 1999). Because this research corpus is so extensive and has been utilized by both organizational scholars and many disciplines outside organizational studies, every effort was made to obtain primary sources in this area. These primary sources include foundational monographs and studies, primarily from the 1960s-1990s, that describe organizational adaptation theories derived from hundreds of independent research studies across multiple sectors. Particular attention has been given to monographs and articles that apply an organizational adaptation framework to higher education. Additionally, higher education has provided a fecund area for organizational research and has been an influential discipline for organizational theorists (Bastedo, 2012). Twentieth-century scholars have utilized the organizational adaptation framework for higher education building from this previous research, and those more contemporary studies were instructive in further developing the constructs described in this chapter. The historical, physical monographs were obtained through the library at the University

of Arkansas, interlibrary loan, and extensive procurement from online used book sellers. Journal articles and more contemporary sources were easily obtained through open access research websites. Importantly, a critical saturation was achieved in which each contemporary source included references to the same foundational sources already present in the literature review.

The second body of research sought for this study was literature on the digital revolution in the music industry. Tangentially, the entertainment industry and the cultural sector has been a previous topic of organizational research (Hirsch, 1972), but because this study was centered around the major technological changes in the music industry, the timeframe of each source was heavily considered. Music industry scholarship spans economic, artistic, legal, and technological disciplines, and as such, presenting the story of the music industry's digital revolution required monographs and journal articles with a specific focus on the last twenty years. These sources were obtained through the University of Arkansas libraries and through online book sellers. Because this continues to be a rapidly developing field, some sources were selected for their important historical overview (e.g., Fisher, 2004), however the majority of sources date from the last five years and were specifically selected for the "up-to-date" nature of their commentary and information. Saturation was achieved through cross-referencing and, due to my experiences with the music industry, the validity of sources was simple to address.

Finally, higher music education is a rich area of scholarship wherein some subfields are highly populated with research and others, notably sparse. The literature review for this study concentrated on this body of research in order to address existing or potential organizational adaptation strategies observed in higher music education in response to the digital revolution.

Research in this area covers multiple domains in higher education and spans curriculum, co-curriculum, faculty, admissions and access, online learning, governance, facilities, and external partnerships. Because this study examined response to music industry change, the date of publication was a primary factor in selection, as only literature in the past 20 years would be able to reflect the digital music era. This corpus of literature ranges from journal articles across many sub-disciplines, policy recommendations from organizational reports, scholarly monographs, and dissertations. All sources were obtained through libraries, used book sellers, open access websites, and interlibrary loans. One particularly valuable source was the data collected from the Higher Education Arts Data Services (HEADS) annual reports. These data are described in *Appendix II*. Because the search for literature for this study was conducted almost entirely through internet searches and database queries, a brief list of keywords used in search engines and library search tools is listed in *Appendix III*.

Theories of Organizational Adaptation

Foundations in Open Systems Theory

The post-war period of the late 1940s and 1950s was a period of flux for organizational theory. Bureaucratic models based on the work of Weber dominated scholarship and generally ignored environmental factors in favor of a concern for predicting the efficiency of organizations (Aldrich, 1979; Sporn, 1999). Simultaneously, some theorists influenced by the work of biologists included consideration of an organization's environment in their writings (Aldrich, 1979). These scholars coined "open systems theory"; in contrast to "closed systems" that take into account very little, if any environmental influence; as the umbrella term that defined organizations as "'open' to their environment" (Sporn, 1999, p. 37) and therefore influenced by conditions in that environment (Aldrich, 1979; Neumann, 2012; Sporn, 1999). Open systems

theory postulated that the successful relationship between an organization and its environment is crucial to the survival of that organization (Pfeffer & Salancik, 1978; Sporn, 1999). Consideration of an organization's environment as not only the context in which an organization can exist but through which an organization develops a relationship on which its existence is defined and dependent, provided organizational theorists and social science researchers a framework from which to compose multiple theoretical concepts of how an organization's relationship with its environment influences its actions and survival (Khandwalla, 1977; Sporn 1999). Thus, open systems theory became the foundation for studying organizational adaptation and the theory upon which organizational adaptation models can be based (Donaldson, 1996; Emery & Trist, 1965; Sporn, 1999). In the context of higher education, Neumann (2012) reflects on the influence of open systems theory and its longevity as a foundational idea: "open systems thinking offers a broadly spanning logic of how higher education organizations function" (p. 306).

In order to further conceptualize organizational adaptation through the broad lens of open systems theory, each term merits a more refined definition. Aldrich (1979) defines organizations as "goal-directed, boundary-maintaining, activity systems" (p. 6). As Sporn (1999) explains, the three aspects of open systems theory are an organization's environment, interrelated subsystems, and congruence between the systems. The conceptualization of organizations as systems is critical as it allows the acceptance of Sporn's literature-based definition of "adaptation" as "the process by which systems seek an equilibrium or 'fit' with their environment" (p. 39). The continuous nature of adaptation, described by Cameron (1984) as a "process, not an event" (p. 123) supports Sporn's (1999) construct and therefore, organizational adaptation can be

constructed as *the process by which a goal-directed, boundary-maintaining, activity system works to achieve balance with its environment* (Aldrich, 1979; Cameron, 1984; Sporn 1999).

Cameron (1984) differentiates the study of organizational adaptation as qualitatively different than the study of planned change. Whereas planned change literature focuses on "methods and techniques" (p. 123), the literature on adaptation focuses on theories of the change process or outcomes. Additionally, planned change or "organizational development" comes from within the organization whereas adaptation is environmentally influenced (Cameron, 1984). This distinction between internally and externally driven organizational change is a defining feature of organizational adaptation literature. The biological heritage of open systems theory provides the three key factors described by Sporn (1999) as important to organizational adaptation: openness, homeostasis, and evolution. Openness refers to the way in which the environment influences the internal function of a system (henceforth, organization) and the way an organization receives input from the environment that results in transformation and feedback. Homeostasis exists when an organization, through balance with its environment is able to maintain a steady state and evolution, much like its biological definition, refers to the ability of an organization to become more complex as it adapts to challenges in its environment (Sporn, 1999). It is through this combination of concepts that organizational adaptation theories have been developed, studied, and compared.

Population Ecology

Sociology's historically "fickle romance" with ideas borrowed from the theory of evolution (Aldrich, 1979) and the adoption of an open systems framework resulted in growing attention to the population ecology model for organization adaptation in the 1970s. Aldrich (1979) remains credited as a major architect of this theory, though not a sole author (Cameron,

1984). Initially referred to as the "natural selection" model, the population ecology approach begins with acknowledging the supremacy of an organization's environment in influencing organizational change (Aldrich 1979). Much like the biological idea of natural selection, the population ecology model "explains organizational change by examining the nature and distribution of resources in an organization's environment" (Aldrich, 1979, p. 27). Sporn (1999) similarly describes this organizational adaptation according to the population ecology model as "natural selection by environmental demands" (p. 48). As Aldrich (1979) emphasizes, the model "attempts to explain the *process* of change" (p. 26) and as such, population ecologists ascribe to organizations the Darwinian processes of variation, selection, and retention (Aldrich 1979; Sporn, 1999).

Variation refers to the planned or unplanned development of organizations of the same form. Selection is the means by which organizations that are a more perfect "fit" for their environment remain in the population of organizations, and retention occurs when organizational forms are duplicated or preserved over time (Aldrich, 1979). Environmental fitness is not absolute; it is only relative: An organization need not be the best fit in order to survive, it only needs to be a better environmental fit than its competitors. A second important consideration of an organization's environmental fit is described by Aldrich: "fitness of an organization does not determine survival, only the tendency to survive" (p. 34). As such, most theorists apply the population ecology model to populations of organizations, rather than individual organizations (Cameron, 1984; Sporn, 1999), though Aldrich (1979) argues that single organizations can be examined through this framework.

A definitive pillar of the population ecology model is an organization's environmental "niche" defined by Sporn (1999) as a "the subunit[s] of environments" (p. 49). An environmental

niche has a "size" and a "shape" with size referring to the amount of resources available to an organization and the shape referring to the types of activities an organization performs (Cameron, 1984). Sporn (1999) describes a general principle pertaining to changes in environmental niches and their effect on organizations. When a change in niche size occurs, organizations with greater degrees of specialization are most adaptive and when a change in niche shape occurs, organizations with greater generalization are the most adaptive. The population ecology model is often cited as having a primary concern with organizational mortality (Hilburn, 2013; Sporn, 1999) but Aldrich (1979) argues that almost all aspects of organizational behavior and adaptation can be explained using this approach. Among the organizational adaptation theories, the population ecology model highlights organizational mortality as the end result of unsuccessful adaptation; Populations of organizations evolve through the selection of better fitting organizations and the mortality of unsuitable organizations (Aldrich, 1979).

Life Cycles

As early as the 1960s organizational scholarship discusses versions of the life cycles model (Cameron & Quinn, 1983). Cameron and Quinn's (1983) combinatory and reductive discussion of nine different previous versions of organizational life cycles centered around four "stages" of organizational development. In the first stage, the entrepreneurial stage, organizations are occupied with "innovation, niche formation and creativity" (p. 40). The second stage, "collectivity", is marked by a high degree of cohesion and commitment from the organization's members resulting in informal structure and continued innovation (Cameron & Quinn, 1983; Cameron, 1984). Organizations then move into the third stage, "formalization and control" in which the organization focuses on institutionalization and formalizing goals (Cameron, 1984).

Finally, the fourth stage called "Elaboration of Structure" signifies the organization's activities will be focused on domain expansion, creation of subsystems, decentralization and a renewed adaptability that did not exist in the third stage (Cameron, 1984).

Organizations can move quickly or slowly through each of these stages (Cameron & Quinn, 1983; Hilburn, 2013) and in each stage organizations face challenges that are overcome by the progression to the subsequent stage (Cameron, 1984). Differing from the "deterministic" (p. 127) population ecology model, Cameron (1984) discusses the capacity of the life cycles model to account for the capabilities of management. Organizational management has the ability to affect how quickly or slowly organizations progress through the four stages, and what stage an organization will return to after completing stage four (Cameron, 1984). Referencing the open systems framework in their study of organizational effectiveness, Cameron and Quinn (1983) stress that the reaction to environmental change will depend on the stage of an organization's development in the life cycles model. A key factor in their study was the difference in how organizations react to turbulent environments. In contrast to the theory of strategic choice, arguing that in a turbulent environment *all* organizations will become naturally more flexible and adaptive (Child, 1972, p. 3), Cameron and Quinn (1983) observed:

> The reaction of an organization to external environmental turbulence will partly depend on its stage of development. In an organization operating in the collectivity stage, turbulence would result in a tightening up of controls and a tendency toward a mechanistic structure (progressing to stage 3). If the organization was already in the formalization and control stage, the tendency would be toward a flexibility and elaboration of structure (progressing to stage 4). (p. 50)

The emphasis on an organization's stage, progression, and the power of management to influence that progression is critical for consideration in the study of higher education adaptation.

Resource Dependence

Jeffery Pfeffer and Gerald Salancik are often credited by others (e.g., Hilburn, 2013; Sporn, 1999) as major architects of the resource dependence theory through their seminal book, *The External Control of Organizations* (1978). The resource dependency theory defines organizations as "coalitions" (p. 24) that require resources for their continued survival (Pfeffer & Salancik, 1978). Organizational behavior and adaptation are then conceptualized as the way in which organizations acquire resources and manage resource exchanges with the other organizations and "social actors" (p. 258) that make up their environments (Pfeffer & Salancik, 1978). These resources can be financial, material, social, or informational, and because no organization completely controls all the resources it requires, an organization depends on elements in its environment for these resources (Pfeffer & Salancik, 1978). Interdependence as described by Pfeffer and Salancik (1978) illuminates this exchange: "for continuing to provide what the organization needs, the external groups or organizations may demand actions from the organization in return" (p. 43). Interdependencies of this nature virtually assure some external aspect of control over the focal organization (Pfeffer & Salancik, 1978). The resource dependency perspective is influential in its formulations of organizational effectiveness, environmental perception, the role of management, and organizational adaptation strategies that inform both the power of the environments and organizational response to turbulent environments (Cameron, 1984; Hilburn, 2013; Pfeffer & Salancik, 1978; Sporn, 1999).

Organizational *effectiveness* as defined by the resource dependence theory is "an external standard applied to the output or activities of an organization" (Pfeffer & Salancik, 1978, p. 35) whereas *efficiency* is defined as "an internal standard of organizational performance" (Pfeffer & Salancik, 1978, p. 33). Organizations can be successful in their adaptations when efficiency and

effectiveness are well managed, and unsuccessful when they are misinterpreted (Pfeffer & Salancik, 1978).

The resource dependence perspective identifies the importance of management in the control of organizations. The function of management is to "direct the organization toward more favorable environments and to manage and establish negotiated environments favorable to the organization" (Pfeffer & Salancik, 1978, p. 263). Three managerial roles fulfill this mission: the symbolic, the responsive, and the discretionary (Hilburn, 2013; Pfeffer & Salancik, 1978; Sporn, 1999). Because the organization is dependent on resource exchanges, each of these roles reflect the way that management navigates an organizations' interdependencies. The symbolic role of management creates a belief that an organization's actions are the result of an individual and through selecting, rewarding, or replacing that individual, an organization is adapting and changing its behavior (Pfeffer & Salancik, 1978). Since "organizational context tends to encourage selection of administrators appropriate for coping with that context" (Pfeffer & Salancik, 1978, p. 242), the very act of selecting managers and administrators is a declaration of the importance of particular interdependencies and environmental considerations (Pfeffer & Salancik, 1978). In the responsive role, managers are interpreting and responding to their environment in such a way as to guide organizational activities. This "information gathering" (Pfeffer & Salancik, 1978, p. 266) is similar to the "information systems" concept discussed by Aldrich (1979). The discretionary role of management seeks to "alter the interdependencies confronted by the organization" (Pfeffer & Salancik, 1978, p. 267), in effect, seeking to influence the environment of the organization.

Symbolic Action

Pfeffer's (1981) symbolic action model builds upon the symbolic role of management described in the resource dependence theory (Pfeffer & Salancik, 1978). The symbolic action model defines organizations as "systems of shared meanings organized through the development of shared paradigms" (Pfeffer, 1981, p. 21) in which the members of an organization are united by common conception of reality. Organizational management is defined as those activities that "construct and maintain a system of shared beliefs and meanings" (Pfeffer, 1981, p. 28) and it is organizational managers that take "symbolic action" to ensure such unique realities are experienced by the members of the organization and the environmental context. Management may take symbolic action that is "directed internally, to produce organized collective action, and externally, as part of a process of legitimizing the organization in its larger social context" (Pfeffer, 1981, p. 21). In fact, the symbolic action model as described by Pfeffer (1981) distinguishes between the idea of symbolic and substantive action. He explains that organizational managers take symbolic action in order to, (a) obscure organizational assessment either internally or externally; or (b) because it can be more effective than substantive action in some cases (Pfeffer, 1981). This is not to imply that symbolic action is ineffective, rather, that symbolic action through the inherent power of shared meanings, visions, concepts, beliefs, ideas, and emotional inspiration *is* the most effective way that managers can initiate organizational actions internally to appease their constituents or adapt to their environment (Cameron, 1984; Hilburn, 2013; Pfeffer, 1981). Symbolic action can be used to *create* the organizational environment and control perception, which this model clearly articulates as a shared reality. This idea has formed the basis of including public speaking, writing, communication, and team building skills in business education and managerial training for all types of organizations and

disciplines (Pfeffer, 1981). Organizational concepts of shared realities are also the source of conflict and competition between organizations as each possesses its own paradigm (Pfeffer, 1981). Furthermore, management can engage in deception via symbolic action by creating a shared meaning around an action without genuinely changing that organization through any meaningful reform (Pfeffer, 1981).

Pfeffer (1981) predicts that as environments become more complex, interconnected, and regulated, which Aldrich (1979) and Emery and Trist (1965) would define as "turbulent", the act of management will become increasingly symbolic (Pfeffer, 1981). Though not as thoroughly documented as the nine theories in this literature review, contemporary organizational ideas such as the "feminist and gendered organization" and the "spiritual organization" (Manning, 2018) build on the symbolic action model's sensitivity to the cultural and interpretive meaning-making frameworks within organizations. Higher education organizations in particular exhibit this trait, described by Neumann (2012) as "partial expressions of a larger, encompassing constellation of contemporary higher education-interested activities" (p. 318), locating them as organizations with immense abilities to define the social realm.

Cybernetics

The modern theory of cybernetics developed in the 1930s and 1940s as a theory of machines that has since been applied to systems of all types including biological, physiological, social, organizational, and economic (Ashby, 1956). As laid out by Ashby (1956), the theory of cybernetics is "a theory of machines that asks, 'what does this machine do?'" (p. 1) and through mathematical reduction deduces from all possible outcomes and behaviors that a machine *can* produce, the limited number of outcomes or behaviors that it *actually* produces from a given input (Ashby, 1956). The cybernetic theory is chiefly concerned with laws of variety, regulation,

and control (Ashby, 1956). Though variety is defined as the "set" of possibilities that a machine might produce, regulation and control function to "block the flow of variety from disturbances to essential variables" (Ashby, 1956, p. 201). Through this blockage, "survival" occurs because no variables that are necessary for survival are pushed outside of the range of conditions for that survival (Ashby, 1956). In essence, the cybernetics theory describes the relationship between variety (the source of which can be natural or constructed) and regulation. Regulation results in control, thereby limiting variety in the possible outputs of a machine (Ashby, 1956). As applied to organizational systems the cybernetics theory then describes a self-regulating concept of large and complex systems (Ashby, 1956; Birnbaum, 1988). The challenge in complex cybernetic systems, Ashby (1956) argues, is the "variety of disturbances that must be regulated against" (p. 244).

Birnbaum (1988) applies the cybernetic theory to higher education in his book *How Colleges Work*. This work further elaborates on cybernetics and describes from an organizational perspective many of the concepts that Ashby (1956) described using mathematical expressions: "in a cybernetic system, organization subsystems respond to a limited number of inputs to monitor their operation and make corrections and adjustments as necessary; organizational responses are not based on measuring or improving their output" (Birnbaum, 1988, p. 181). Furthermore, both Ashby (1956) and Birnbaum (1988) describe "feedback loops" as the mechanisms by which an organization learns about its environment and responds by "making minor adjustments in ongoing organizational processes as necessary to keep them functioning within acceptable limits" (Birnbaum, 1988, p. 183). However, if adjustments and regulations are not successful the feedback loops trigger more dramatic actions that "shock" and "amplify" the

systems' response thereby forcing the system back within its acceptable operation limits (Ashby, 1956; Birnbaum, 1988).

Contingency Theory

Dissonance between the classical and human relations philosophies of management resulted in the synthesis of the contingency theory of organizations in the mid 20th century. (Donaldson, 1996; Khandwalla, 1977; Lawrence & Lorsch, 1967; Sporn, 1999). Lawrence and Lorsch (1967) were early proponents of this theory, harmonizing a substantial amount of empirical research to articulate contingency theory in their 1967 book *Organization and Environment*. Though almost exclusively focused on corporations, the contingency theory has many implications for organizational adaptation across all organizational types. Contingency theory focuses on analyzing the structure of organizations and the relative fit of organizational structures with an organization's environment (Donaldson, 1996; Lawrence & Lorsch, 1967; Sporn, 1999).

Donaldson (1996) defines the structure of an organization as "the set of relationships between organizational members" (p. 57) and holds as a guiding principle that in contrast to classical theory "there is no single organizational structure that is highly effective for all organizations" (p. 57). Lawrence and Lorsch (1967) elaborate: "internal attributes of the organization in terms of structure and orientation can be tested for goodness of fit with the various environmental variables and predisposition of its members. Unit performance emerges as a function of this fit" (p. 209). As Donaldson (1996) explains the "contingency factors" are size, strategy, task uncertainty, and technology and the organization must work to "fit the structure to the contingency factors of the environment" (p. 57). Organizations must ask *which* contingency factors each particular aspect of the organization needs to fit (Donaldson, 1996).

A general principal of the contingency theory is Donaldson's (1996) description of the inverse relationship between task environments and structures. As task uncertainty increases, hierarchical structures are displaced by more "organic" structures favoring participation and communication (p. 59). Lawrence and Lorsch (1967) and Sporn (1999) focus on differentiation and integration as the adaptive strategies of contingency theory in turbulent environments, where differentiation involves greater independence of the subunits and integration involves the coordination of such increasingly independent subunits. Both Donaldson's (1996) and Sporn's (1999) research confirm that when controlling for an organization's size, the more complex, uncertain, and turbulent the environment becomes, the greater levels of diversification and decentralization will be predicted by the contingency theory model.

Donaldson additionally (1996) elaborates on the inherent tension between contingency theory and the strategic choice model (Child, 1972). Highlighting the intrinsically deterministic quality of the contingency theory, Donaldson (1996) surveyed empirical research and found that 95% of adaptations from environmental "misfit" to environmental "fit" involve changing structures, not contingencies. Donaldson (1996) concedes that "The organization bows to the imperative of adopting a new structure that fits its new level of the contingency factor in order to avoid loss of performance and misfit" (p. 66).

Two additional observations on leadership are present in contingency theory that are relevant to organizational adaptation. First, Lawrence and Lorsch (1967) contend that effective leadership is essentially the act of guiding the efforts of organizational subunits, a principal that echoes cybernetic ideas (Birnbaum, 1988). Secondly, a tangential but important finding in Donaldson's (1996) summary of contingency theory is that the "functional background" (p. 68) of the CEO or manager affects the structure of an organization.

Strategic Choice

The strategic choice model was introduced and coined by Child (1972) as a refutation of more deterministic prevailing theories such as population ecology and contingency theory (Aldrich, 1979; Child 1972; Sporn 1999). Child (1972) argued that such "contextual" theories "fail to give attention to the 'agency of choice' by whoever directs the organization" (p. 2). In making the case that organizational decision makers can affect the structure of the organization through "political action" (p. 2), the manner in which an organization interprets its environment, and the environment itself, Child (1972) presents organizational theorists with several lenses through which to view organizational behavior.

Central to the strategic choice model are two major concepts. First, organizational decision makers can select the types of environments they operate within (Child, 1972, p. 3). Second, organizations have the ability to influence their environments directly. Strategic choice is exercised by the "dominant coalition" within an organization (Aldrich, 1979; Child, 1972) and through such choices, organizational decision makers respond to turbulent environments in several ways. Cameron (1984) and Sporn (1999) described the types of strategies that a dominant coalition might pursue. A *domain defense* strategy seeks to "enhance the legitimacy of an organization and buffer it from environmental demands" (Sporn, 1999, p. 44). *Domain offense* finds the organization looking to further expand its current areas of expertise and search for weaknesses in its environment to exploit (Cameron, 1984). Finally, *domain creativity* is a diversification strategy primarily seeking to expand the organization's activities into less turbulent environments or spread risk throughout multiple environments (Cameron, 1984). Child (1972) and Aldrich (1979) both describe the role of environmental perception, though Child (1972), advocating for strategic choice states: "The predictive power of the argument from

environment [population ecology] is further qualified by decisions about organizational structure dependent on the prior process of perception" (p. 5). This focus on organizational management's perception of environments relates to Cameron's (1984) description of the types of organizational responses. He categorized four levels of "strategic competence" that lead to the implementation of adaptive strategies by organizational leaders. "Prospector Organizations" are the "first in" to adapt a new form, technique, or concept. "Analyzer Organizations" wait to find out if a given strategy will be proven successful, and "Defender Organizations" seek stability and are usually slow to adapt. Finally, "Reactor Organizations" will sporadically and haphazardly implement strategies and are usually not able to follow through ending up strategically adrift (Cameron, 1984).

Institutional Isomorphism

The theory of institutional isomorphism originally described by DiMaggio and Powell (1983) can be considered a powerful variation on the population ecology model. Through a synthesis of empirical evidence, DiMaggio and Powell (1983) argue that over time, successful organizations in any field adapt similar characteristics and resemble each other: "highly structured organizational fields provide a context in which individual efforts to deal rationally with uncertainty and constraint often lead, in the aggregate, to homogeneity in structure, culture, and output" (DiMaggio & Powell, 1983, p. 147). They outline three mechanisms by which this "institutional isomorphism" (p. 150) occurs: coercive, mimetic, and normative (DiMaggio & Powell, 1983). In coercive isomorphism, external pressures from other organizations, social actors or "cultural expectations" (p. 150) cause all the organizations in a particular field to behave in a similar fashion. Memetic isomorphism results from organizational responses to environmental uncertainty. DiMaggio and Powell (1983) argue that "Uncertainty is also a

powerful force that encourages imitation" (p. 151) and in times of uncertainty, goal ambiguity, and turbulence, organizations will actively seek to imitate other organizations that they perceive to be more legitimate or more successful (DiMaggio & Powell, 1983, p. 151). Finally, normative isomorphism is the process by which organizations reliant on standardized professional education, socialization, or credentials will come to resemble each other because the individuals who compose these organizations bring standardized skill sets and require similar functionality (DiMaggio & Powell, 1983; Manning, 2018; Sporn, 1999). This type of isomorphism is common in situations that are dependent on standardized training, professional associations, and analogous requirements for members of the organization set (DiMaggio & Powell, 1983).

The institutional isomorphism theory contains two further observations that differentiate it from the population ecology model. Organizational efficiency and organizational effectiveness are not the end result of isomorphism, but rather, institutional isomorphism is an intrinsic process that, for the reasons described above, results in similar organizations in the same field. Any increase in organizational effectiveness or efficiency is only a byproduct of sufficient isomorphism over time that allows organizations to become most similar to a hypothetical organization perfectly fitting its environment (DiMaggio & Powell, 1983; Sporn, 1999). Secondly, institutional isomorphism acts as a counterpoint to the prevailing idea that seemingly omniscient "elites" (p. 157) control organizational change (DiMaggio & Powell, 1983). In this case, the theory assigns power back to the environment, that being, the other organizations or social actors that influence the institutional isomorphic processes through which organizational change develops (DiMaggio & Powell, 1983).

Network Organization

Powell's (1990) conception of the network organization theory marks a more recent contribution to organizational adaptation literature (Sporn, 1999). Powell (1990) argues that a "network organization" differs from the concepts of "markets" or "hierarchies" in qualitative ways. Whereas markets offer bargaining, choice, and competition (Sporn, 1999) and hierarchies offer clean lines of authority and formalized decision making (Powell, 1990), the network organization is based on lateral systems of exchange that are mutually supportive in nature. Powell (1990) articulates:

> Networks are 'lighter on their feet' than hierarchies. In network modes of resource allocation, transactions occur neither through discrete exchanges or administrative fiat, but through networks of individuals engaged in reciprocal, preferential, mutually supportive actions...In essence, the parties to a network agree to forgo the right to pursue their own interests at the expense of others." (p. 303)

Powell (1990) subsequently describes three critical components that anchor the network theory. "Know-how" emphasizes the importance of laterally shared information and mutually shared obligations while admitting that this knowledge is "hard to codify" (p. 324). Network organizations have an advantage over other types of organizational forms due to their abilities to adapt and integrate new technologies more quickly (Powell, 1990). This is referred to by Powell (1990) as "demand for speed" (p. 325). Finally, "trust" is defined by Powell (1990) as the idea that "certain social contexts encourage cooperation and solidarity" (p. 326), thereby allowing the network to exist.

In contrast to the other organizational adaptation theories, network organization theory portrays networks *themselves* as the adaptive strategy in response to turbulent and complex environments: "the open-ended quality of networks is most useful when resources are variable and the environment [is] uncertain" (Powell, 1990, p. 322). This idea indicates that since

organizational adaptation is dependent upon environmental perception, by adopting network characteristics, an organization improves its abilities to translate its perception of the environment into organizational action (Aldrich, 1979; Child, 1972; Daft & Weick, 1984; DiMaggio & Powell, 1983; Pfeffer & Salancik, 1978; Powell, 1990).

Emergent Themes in Organizational Adaptation

Taken as a whole, the most widely utilized and researched organizational adaptation theories include striking parallels and pronounced differences. Though each theory can be applied singularly to the concept of organizational adaptation, it is advantageous to examine multiple models to gain a deeper understanding of the subject (Cameron, 1984; Hilburn, 2013). Specifically, in the higher education setting, organizational researchers such as Manning (2018) and Sporn (1999) advocate for such a multi-modal approach. Throughout the organizational adaptation models, three themes emerge that are applicable to this study of higher music education; (a) the turbulent environment; (b) environmental perception; and (c) a typology of adaptation strategies derived from the nine governing theories.

The Turbulent Environment

Emery and Trist (1965) have been credited with synthesizing the concept of "turbulent fields" (p. 26) later called "turbulent environments" (Aldrich, 1979; Pfeffer & Salancik, 1978). In their 1965 paper, *The Causal Texture of Organizational Environments,* Emery and Trist define four types of organizational environments based upon complexity. Type I environments are *placid randomized* where "organizations can exist quite randomly as single units" (p. 31). Type II environments are considered *placid clustered* in which some amount of strategy is needed by organizations to achieve their goals and centralization emerges (Emery & Trist, 1965). The Type III environment is one in which control becomes more decentralized to allow organizations to

conduct operations that help them achieve their goals. This is described as *disturbed reactive* (Emery & Trist, 1965). The most complex environment is the *turbulent environment* or Type IV (Aldrich, 1979; Emery & Trist, 1965). In a turbulent environment, "organizations, however large, cannot adapt simply by their direct interactions" (Emery & Trist, 1965, p. 31) because "the ground is in motion" (Emery & Trist, 1965, p. 26). Aldrich (1979) elaborates upon this definition of turbulence stating that turbulent environments are experiencing increasing interconnection and an increasing *rate* of interconnection when "all organizations face an increase in uncertainty because the rules governing environmental changes are themselves changing" (Aldrich, 1979, p. 73). Pfeffer and Salancik (1978) further emphasize the role that an organization's perception of its environment plays in environmental turbulence through "uncertainty" (p. 67) and the effect of problematic uncertainty affecting organizations' dependence on environmental elements. Furthermore, Aldrich (1979) echoes this refrain writing turbulent environments possess "an increasing causal interconnection that renders environments obscure to local observers" (p. 69). This obscurity is reflected in Khandwalla's (1977) description of environmental turbulence wherein "the information received by the organization is often contradictory" (p. 333).

Environmental Perception

Owing to the open systems framework for each adaptation theory, an organization is influenced by its environment and therefore, an organization must learn about its environment (Aldrich, 1979; Khandwalla, 1977; Neumann, 2012). A version of this "environmental perception" concept appears in each adaptation theory. There is mutual concurrence in the theories that the absolute reality of the environment exists but is only known through environmental perception which in turn affects the organizational actions, behaviors, adaptations,

and survival. Figure 1 depicts a visualization of environmental perception as the intermediate and necessary stage between the environmental reality and organization adaptation.

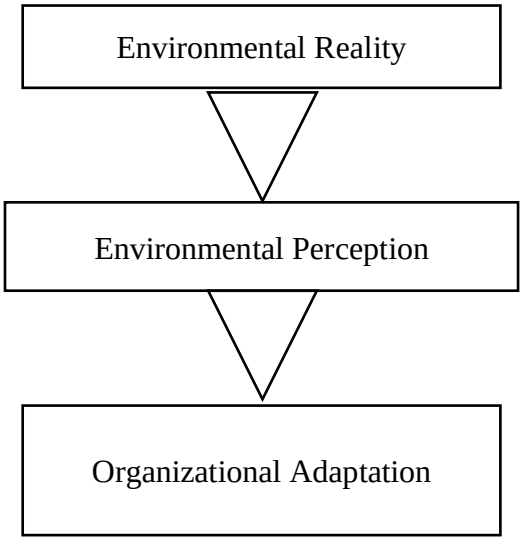

Figure 1
Visualization of Environmental Perception

Daft and Weick (1984) expand on the concept of environmental perception by considering organizations as "interpretation systems" (p. 285). In so doing, they present a three-stage process consisting of ideas echoed in the organizational theories. The first stage is "scanning" in which environmental data are collected. "Interpreting" is the second stage where such data are given meaning, and the third stage, "learning", is where organizational actions are taken (Daft & Weick, 1984). Furthermore, Daft and Weick (1984) categorize four modes of organizational interpretation (environmental perception) along an axis of analyzable, unanalyzable, passive, and active. Those modes are *undirected viewing* (unanalyzable, passive), *conditioned viewing* (analyzable, passive), *enacting* (unanalyzable, active), and *discovering* (analyzable, active) (Daft & Weick, 1984). Aldrich (1979) identifies environmental perception as a "intervening link between environments and resulting organizational activities" (p. 122). For the purposes of this study, a synthesized definition was created that incorporates the three stages

of Daft and Weick's (1984) model and the Aldrich's (1979) link between environmental perception and action. Environmental perception is therefore defined as, the *scanning, interpreting, and learning processes that an organization uses to understand its environment and guide activities* (Aldrich, 1979; Daft & Weick, 1984).

Environmental perception is discussed extensively in the population ecology theory and Aldrich (1979) highlights the conceptualization of environments as "information flows" (p. 122) linking environmental perception with the actions an organization takes. Environmental perception in the resource dependence model is defined as the "enacted environment" (Pfeffer & Salancik, 1978, p. 72). The environment of an organization comes to be known or "enacted" by the individuals that compose that organization. Additionally, "the material for decision making is always the enacted environment of the past" (Pfeffer & Salancik, 1978, p. 73). Because the environment is always enacted, an organization will have blind spots in its perceptions of the environment and its actions will never reflect a truly neutral environmental reality, but rather a response to the perception of the immediate past environment (Pfeffer & Salancik, 1978). Key to the cybernetic theory is that the self-correction and regulatory processes cannot occur without effective subsystems sensitive to disturbances in the environment (Ashby, 1956; Birnbaum, 1988; Hilburn, 2013). These "sensing units" (Birnbaum, 1988, p. 192) create and close the loops between the organization and the environment. Organizational management must be aware of how to create and direct sensing units to be effective in collecting data from which cybernetic processes of reaction can be triggered (Birnbaum, 1988).

Though contingency theory does not specifically target environmental perception as a key principle, it follows that the diversification of an organization can only be accomplished by identifying contingencies that demand differentiation. Lawrence and Lorsch (1967) explain

several appropriate structural differentiation concepts as well as highlight differentiation errors committed when organizations misidentify the most effective paths to diversification. These differentiation errors could only come about through ineffective environmental perception. According to Lawrence and Lorsch (1967), "recognizing emerging task differences at the proper time" (p. 214) constitutes proper environmental perception and appropriate differentiation. Environmental perception does not receive explicit treatment in the institutional isomorphism theory, apart from the critical job of management to decide which organizations it perceives as "successful" and thus worth imitating; a form of memetic isomorphism (DiMaggio & Powell, 1983). Cameron and Quinn's (1983) life cycles model circumscribes environmental perception within an organization's response to a turbulent environment whereby an organization's stage is paramount in determining the environmental perception effectiveness.

A defining characteristic of strategic choice theory is the power of management not only to perceive the external environment, but also the potential to alter that environment (Child, 1972). Symbolic action theory elaborates on strategic choice, providing management with the power to define the environment that the organization perceives (Pfeffer, 1981). Sporn (1999) makes the case that higher education institutions confronted by dynamic environments should "experiment" (p. 57) with network concepts in order to more effectively adapt. Additionally, Powell's (1990) theory presents the importance of environmental perception in network organizations as another competitive advantage when compared to markets and hierarchies as "networks create incentives for learning and dissemination of information, thus allowing ideas to be translated into action quickly" (Powell, 1990, p. 322).

In order to summarize the concepts of environmental perception and each organizational adaptation theory's predicted response to a turbulent environment, Table 1 illustrates each theory along with the first two emergent themes.

Table 1
Environmental Perception and Predicted Response to a Turbulent Environment by Organizational Adaptation Theory

Theory	Environmental Perception Concept	Predicted Response to a Turbulent Environment
Population Ecology	The environment is perceived via "information systems" that are the "intervening link" between environments and the organization's response.	Organizations move into new environmental niches.
Life Cycles	Environmental perception and its effects will be contingent upon which stage in the model an organization is currently occupying.	Organizations will progress into subsequent stages with a distinction between new and mature organizations.
Strategic Choice	Environmental perception is power held by management. Management can perceive the environment *and* alter it.	Organizations will choose either a domain defense, domain offense, or domain creativity response.
Resource Dependence	The "responsive role" of management is to gather information and react accordingly.	Organizations will work toward the loosing of dependencies, diversification and/or increasingly centralized control.
Symbolic Action	Management has great power to shape and define the environment through a shared system of realities.	Organizational management's role will become increasingly symbolic affecting organizational actions and representing shared ideas both internally and externally.
Cybernetics	The environment is perceived through "sensory units" that inform a reactive and regulatory response from management.	Organizational management seeks to limit environmental disturbances though regulation and control but can employ system shock actions when needed.
Contingency Theory	Environmental Perception constitutes the act of "recognizing" important environmental disturbances at the critical time.	Organizations will trend toward diversification and differentiation, employing more organic structures with less mechanical and hierarchical attributes.

Table 1 (Cont.)

Theory	Environmental Perception Concept	Predicted Response to a Turbulent Environment
Isomorphism	The organization must scan its environment for other organizations to imitate.	Organizations will adopt similarity in structures and function to organizations they perceived as more successful.
Network Organization	Network properties provide greater and more effective environmental perception through decentralization	Organizations will adopt more network-like properties.

Organizational Adaptation Strategy Typology Spectrum

The third emergent theme from the organizational adaptation theories is the construction of an organizational adaptation strategy topology spectrum. Taxonomy in organizational theory is an important research tool and multiple foundational studies have utilized typological methods to facilitate organizational concepts. Cameron and Quinn's 1983 life cycles study created the well-known four-stage typology from nine previously existing theoretical constructs. Categorization of organizational elements features prominently in the Khandwalla's (1977) work on organizational design, Aldrich's (1979) research on the types of organizational environments, and Pfeffer's (1981) studies on leadership.

This construction of a typology of organizational adaptation strategy contains five points along a spectrum that describes expected organizational responses to a turbulent environment. One node represents *decentralization* and the other, *formalization*. Points between the nodes are represented by *generalization*, *inaction*, and *specialization*. Although multiple *theories* are present in several points, each *strategy* across theories is unique. The spectrum provides multi-theory explanatory power for each adaptation strategy. Each point was chosen because of the importance given to these five strategies within the body of organizational adaptation literature and the unique appropriateness of these strategies to higher education.

Chaffee's influential 1985 paper *Three Models of Strategy* is a frequently cited foundational source on the definition of strategy in the organizational setting (Neumann, 2012). She examines linear, adaptive, and interpretive strategies, and mechanisms by which one adaption theory can accommodate multiple strategies depending on the organization (Cameron, 1984; Chaffee, 1985; Khandwalla, 1977). The critical concepts derived from Chaffee's (1985) work are the definition of strategy, the role of leadership in strategy, and the influence of environmental perception on strategy. Strategy can be defined as "integrated decisions, actions, or plans that will set and achieve viable organizational goals" (Chaffee, 1985, p. 90), and similar to theorists such as Child (1972), Chaffee (1985) provides considerable power to organizational leaders in defining strategy: "The heart of strategy making is the conceptual work done by leaders of the organization" (Chaffee, 1985, p. 89-90). A final seminal concept connects to environmental perception since "monitoring the environment and making changes are simultaneous and continuous functions" in adaptive strategy (Chaffee, 1985, p. 91).

Philip Khandwalla conducted groundbreaking work in organizational research in the late 1960s that focused primarily on conceptualizing multiple elements of organizational design. His large-scale studies of 79 U.S. manufacturing firms and 103 Canadian manufacturing and service firms have provided foundational research with broad implications for myriad organizational concepts, including organizational performance, organizational adaptability, and the role of management (Khandwalla, 1977). These studies consisted of long questionnaires sent to the presidents of these organizations and the data collected mark an important attempt at quantifying the complex concepts in organizational studies. Khandwalla's (1977) research further supports the impact of the turbulent environment on organizational adaptation strategy: "the more turbulent the environment… the more innovation-supportive is the top management philosophy"

(p. 564). Importantly, this landmark research also clarifies the direct connection between environmental perception and the turbulent environment: “the more turbulent the environment, the more strategically important to management are uncertainty absorption and avoidance mechanisms like market research, forecasting, advertising, vertical integration, the more organic is the top management style” (p. 335). Khandwalla’s (1977) work also supported a strong correlation between an organic management style and high organizational performance when the external environment was highly turbulent. When considered in concert, the definitions of environmental perception and organizational adaptation strategy become one elegant sentence with an implied correlation: *the scanning, interpreting, and learning processes that an organization uses to understand its environment will guide integrated decisions, actions, or plans to set and achieve viable organizational goals* (Aldrich, 1979; Chaffee, 1985; Daft & Weick, 1984).

Sporn’s (1999) research on adaptation in higher education offers strong evidence that “differentiation has been a common response to environmental demands” (p. 269) and as such, provides theoretical and empirical weight for the measurement of generalization and decentralization as organizational adaptation strategies within the context of coaxial organizational adaptation theories. Gumport and Snydman’s (2002) case study of one large state university spanned 45 years and specifically studied the formal structures of knowledge legitimation based primarily upon reviewing the development of academic programs over time. Their data showed a substantial net increase in academic programing, both in number of departments and in number of degree programs, over the 45-year case study period lending support for the tendency of academic organizations to both decentralize and generalize as an organizational adaptation strategy: “academic organizations tend to respond to knowledge

change with additive solutions, while the complete elimination of structural units is rare" (Gumport & Snydman, 2002, p. 376). However, elements of the resource dependence theory (Manning, 2018; Pfeffer & Salancik, 1978) and life cycles theory (Cameron & Quinn, 1983) remain strong moderating influences on this trend toward decentralization and generalization. Gumport and Snydman (2002) highlight the importance of structural change, a strong reference to contingency theory (Donaldson, 1996; Lawrence & Lorsch, 1976), as a conceptual and practical solution to this dichotomy, whereby "modifying the academic structure enables universities to reconcile competing imperatives for stability and change" (Gumport & Snydman, 2002, p. 377). Importantly, this tension between the tendencies to specialize or generalize is still a critical subject for scholars in the field. Manning's 2018 contemporary textbook on organizational theories in higher education highlights many of the elements previously described by Birnbaum (1988) and Cameron (1984) such as tenure and shared governance, that "create tension between the values of a stable structure versus the adaptability of a flexible, responsive organizational architecture" (Manning, 2018, p. 3). Breneman's (1994) longitudinal study of liberal arts colleges and Gandre's 2001 historical study of music conservatories provide multiple case studies of successful academic adaptation through formalization and specialization, whereby institutions centralized authority, discontinued fringe programming, and rededicated themselves to existing missions. Providing a source of contrast and comparison in the spectrum are the isomorphic and cybernetic strategies based on inaction. Overwhelming evidence for both isomorphism and inaction in the face of challenges are presented in higher education literature from historians (Thelin, 2011; Wilder, 2013), college presidents (Bok, 2013; Bowen, 2011), higher education scholars (Owen-Smith, 2018; Ruben, De Lisi, & Gigliotti, 2017) and the rich

histories of higher education regulating and accrediting organizations (NASM, 1999; Young, Chambers, & Kells, 1983).

Taken together, mid-century theorists such as Aldridge (1979), Cameron (1984) and Khandwalla (1977), and contemporary scholars such as Sporn (1999), Gumport and Snydman (2002), and Manning (2018) illustrate the tendencies of higher education organizations in particular to navigate the tension between organizational adaptation strategies based upon differentiation, generalization, inaction, specialization, and formalization. Each organizational adaptation strategy is subsequently presented in relation to its inclusion within multiple theories.

Decentralization

In an organizational adaptation strategy favoring decentralization, an organization splits its structure into a greater number of autonomous or semi-autonomous units (Khandwall, 1977; Lawrence & Lorsch, 1967). In higher education, a classic example would be the creation of new academic departments, committees, or administrative units (Gumport & Snydman, 2002). This organizational adaptation strategy appears in the strategic choice model as domain creativity where organizations expand into less turbulent environments through new structures (Child, 1972). Contingency theory predicts decentralization as structures become more organic in response to environmental turbulence. The life cycle model's stage four specifies the elaboration of structure as the hallmark of mature organizations, although it allows organizations the ability to repeat each stage of the model (Cameron & Quinn, 1983). Decentralization is also a signature component of the network organization that prizes information sharing and autonomous subunits. (Powell, 1990).

Generalization

In organizational adaptation strategies favoring generalization, an organization diversifies its activities without substantial alteration in organizational structure (Khandwall, 1977; Sporn, 1999). In higher education, creation of new degree programs, new courses, or hiring new faculty would constitute elements of this strategy (Bastedo, 2012; Manning, 2018). Population ecology theory's description of changing environmental niche shape corresponds to the need for an organization to expand its activities (Aldridge, 1979). Loosening of dependencies as described in the resource dependence theory requires organizations to generalize in order to acquire new resources (Pfeffer & Salancik, 1978). Child's (1972) strategic choice theory contains the concept of domain offense in which organizations must seek out new weaknesses in their environment to exploit. Finally, a generalization strategy has the potential to be cybernetic in nature (Ashby, 1956), especially as academic organizations often have significant inertia to expand activities (Gumport & Snydman, 2002).

Inaction

The midpoint on the organizational adaptation strategies typology explains strategies favoring inaction. In these strategies, an organization makes no changes, either intentionally, unintentionally through lack of decision-making capability (Khandwalla, 1977), or subservient to isomorphic principals (Donaldson, 1996). Nearly self-evident in both organizational scholarship and higher education scholarship is the conclusion that large organizations can be highly resistant to change (Aldridge, 1979; Ashby, 1956; Bastedo et al., 2016; Bok, 2013; Khandwalla, 1977; Manning, 2018; Sporn, 1999). This resistance frequently results in very little measurable action taken in response to environmental demands (Christensen & Eyering, 2011; Hendrickson Lane, Harris & Dorman, 2013; Khandwalla, 1977; Manning, 2018). Organizational adaptation

theories contain multiple explanations for resistance to change but within a typology of organizational adaptation strategy, inaction corresponds to either a) institutional isomorphism whereby organizations exhibit no response to environmental demands because they observe no response in similar organizations (Dimaggio & Powell, 1983); or b) cybernetic theory whereby organizational management takes no action assuming that subunits will self-correct to environmental disturbances as needed.

Specialization

A mirror image of generalization, organizational adaptation strategies favoring specialization can be described as "doubling-down" and investing a greater share of the organization's resources and energy in current activities in an effort to improve them or eliminating less-effective activities (Bastedo, 2012; Child, 1972; Gumport & Snydman, 2002; Sporn 1999). In the higher education context, this may consist of program improvement, elimination of fringe activities, or rebranding to reflect a narrower mission (Manning, 2018). This organizational adaptation strategy is prescribed by population ecology theory in the event of a change in an organization's niche size (Aldridge, 1979); a change in the amount of available resources. Similarly, strategic choice theory contains a domain defense strategy consisting of working to enhance an organization's legitimacy and insulate it from environmental threats (Child, 1972). Momentum can play a part in specialization strategies in higher education as illustrated by Breneman's (1994) work on liberal arts institutions. Therefore, cybernetic principals are at work in the organizational adaptation strategy of specialization.

Formalization

In organizational adaptation strategies favoring formalization, an organization strengthens managerial control over all activities or builds structure around fringe activities in

order to exert centralized direction (Birnbaum, 1988; Cameron & Quinn, 1983; Child, 1972; Khandwalla, 1977). Higher education leaders consolidating departments or programs, formalizing external relationships, or imposing a strategic plan on the institution would constitute examples of this strategy (Manning, 2018; Sporn, 1999). The stage three, formalization and control, in the life cycles model specifically indicates the consolidation-type role of management in creating structure around previously informal activities. Symbolic action's emphasis on top-down direction is a clear indication of the importance of formalization in the face of organizational challenges (Pfeffer, 1981). Forced corrections in cybernetic theory (Birnbaum, 1988) exemplify managerial intervention providing cybernetics explanatory power in another organizational adaptation strategy category. Finally, the resource dependency theory describes centralizing control by management as an essential way to manage various dependencies (Pfeffer & Salancik, 1978). Formalization has immense contemporary relevance, particularly in technologically complex sectors. Smith and Telang (2016) laud the formalization strategies of entertainment firms such as *Netflix* which have achieved considerable market innovation through centralization of internal data. Figure 2 illustrates the organizational adaptation strategy typology on the spectrum of decentralization-formalization.

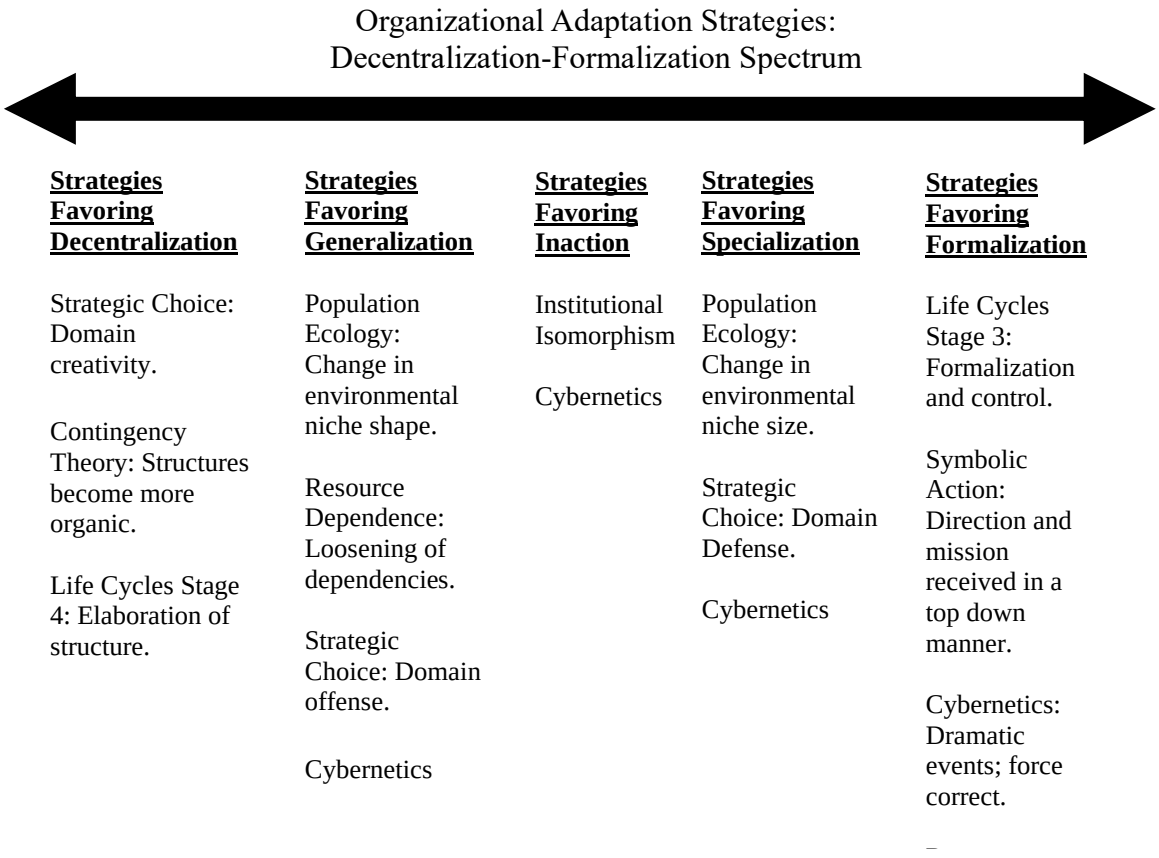

Figure 2
The organizational adaptation typology spectrum by governing adaptation theory and predicted turbulent environment response

Organizational Adaptation in Higher Education

As Bastedo's (2012) extensive review of organizational literature in the higher education sphere demonstrates, higher education has been both a source of research and theory for organizational studies, and a field in which organizational studies have been extensively applied. Relevant to this study, there are several important prior works that have focused on the concepts of organizational adaption as applied to higher education.

Barbara Sporn's (1999) monumental book *Adaptive University Structures* represents one of the most in-depth analyses to-date of organizational adaptation theories in the higher education discipline. Sporn (1999) conducted six case studies of three U.S. and three European

universities, each facing unique environmental challenges to which adaptation was assessed (Sporn, 1999). The institutions studied were New York University, University of Michigan, University of California at Berkeley, University St. Gallen, Università Bocconi, and Wirtschaftsuniversität Wein. Through her case studies, she analyzed these institutions through the lenses of contingency theory, strategic choice, resource dependence, population ecology, institutional isomorphism, and network organization.

Sporn's (1999) intended to outline a theory of organizational adaptation for higher education and in order to anchor her theory, she described some of the unique aspects of higher education institutions that differ from other types of organizations. Four assumptions provided the bedrock of her case studies. First, "universities need a crisis caused by a change in their environment in order to adapt" (p. 76). Second, on the subject of governance, "collegial forms of decision making enhance successful adaptation" (Sporn, 1999, p. 76). Third, on the subject of organizational management: "universities need professional management for successful adaptation" (p. 76). Finally, Sporn (1999) assumes that "change-oriented leadership that recognizes the disparate needs of interest groups facilitates adaptation" (p. 76).

Sporn (1999) addressed two principal concepts; the sources of adaptation in higher education institutions, and the processes by which it occurs. As a result of her case studies, She (1999) offered seven propositions that compose the basis for a theory of adaptation in higher education:

1. Adaptation at universities is triggered by environmental demands which can be defined as crisis or opportunity by the institution.
2. In order to adapt, universities need to develop clear mission statements and goals.

3. An entrepreneurial culture enhances the adaptive capacity of universities.

4. Differentiated structure enhances adaptation at universities.

5. Professionalized university management helps adaptation.

6. Shared governance is necessary to implement strategies of adaptation.

7. Committed leadership is an essential element for successful adaptation. (pp. 269-270)

One common theme of Sporn's (1999) study was the emphasis on organizational differentiation. This concept appears numerous times in the organizational adaptation theories, particularly in resource dependence, contingency theory, and network theory (Donaldson, 1996; Pfeffer & Salancik 1983; Powell, 1990), and informs one side of the adaptation typology spectrum. Another critical conclusion from her study is the triggering crises required for adaptation to occur. In the case of higher music education, the digital revolution in the music industry is this crisis. Most significant to this discussion is Sporn's (1999) suggestions for future research in which she explains that due to increasing levels of diversity in higher education institutions, applying organizational adaptation theories to the program level, instead of the institutional level, would beget promising avenues of study (Sporn, 1999).

Few studies are as widely referenced in organizational adaptation literature as Cameron's 1984 paper *Organization Adaptation and Higher Education.* Cameron (1984) considers four major theories; population ecology, life cycles, strategic choice, and symbolic action; in the context of what he calls the "post-industrial environment" (p. 133) defined as one of "increasing knowledge", "increasing complexity," and "increasing turbulence" (Cameron, 1984, p. 133). Citing exponential increases in complexity and knowledge, Cameron (1984) argues that "it is simply impossible for managers to initiate adaptive strategies in postindustrial environments as

they do now" (p. 134) and owing to that extraordinary complexity, greater specialization of managers will be needed. He writes: "although institutions will have to be more loosely coupled in structure to deal with this environmental complexity, they will also need to be more tightly coupled in their information exchange" (p. 134).

From this potential contradiction between loosely and tightly coupled systems, Cameron (1984) introduces the concept of "Janusian thinking" (p. 136) referring to a person's ability to simultaneously hold contradictory thoughts. He theorizes that the successful educational institution of the postindustrial environment will be the "Janusian Institution": "perpetuating Janusian characteristics in an institution also has the effect of producing flexibility and adaptability, and it enables organizations to cope better with unpredictable environmental events" (Cameron, 1984, p. 136). Furthermore, Cameron (1984) argues that "postindustrial environments will require that institutions enhance their sensing and receptor capabilities because of the tremendous amount of knowledge that will be available. Not being aware of critical elements in the environment could lead to an institution's demise" (p. 139). Indeed, such has been the case with liberal arts colleges (Bok, 2013; Hilbun, 2013), and music conservatories (Gandre, 2001), outlining the risk for many types of music programs in higher education (CMS, 2014; Kardos, 2018; Miller, Dumford, & Johnson, 2017). This emphasis on environmental perception is key to Cameron's (1984) conclusion that all institutions in postindustrial environments will need to be flexible, centralized enough to quickly implement changes, and have excellent sensing capabilities (Cameron, 1984). Although not strictly an organizational adaptation study, Hearn and Heydinger (1985) take special consideration of environmental perception in higher education institutions through a case study at the University of Minnesota. Their work acknowledged the difficulty in knowing the university's environment that stems from

goal uncertainty. Furthermore, universities and educational institutions operate in turbulent environments that align with the concept of turbulence as described by Emery and Trists (1956), Aldridge's (1979), and Khandwalla (1977).

Literature on the challenges faced by higher education institutions is myriad, and a wealth of research examines many elements of the higher education sector in great detail (Bastedo et al., 2016; Bok, 2013). Breneman's (1994) study of liberal arts colleges focused on environmental challenges faced by that sector of higher education in the 1980s. Though he does not specifically examine these colleges from an organizational adaptation framework, Breneman's (1994) inquiry is effectively a population ecology study due to its interest in institutional survival (Breneman, 1994). Through 12 case studies, he examines specifically financial challenges and curriculum changes (Breneman, 1994). In that respect, it could also be considered a resource dependence inquiry since Breneman (1994) elaborates on each individual institution's common quest to secure sufficient resources. Most of the institutions examined in this study are rated by Breneman (1994) as having "good" or "excellent" future prospects.

Few researchers have focused on higher education through the viewpoint of a single organizational adaptation theory, but such is the case with Birnbaum (1988) and his examination of academic leadership using the cybernetics model. Having previously discussed Birnbaum's work, it is sufficient to mention here that all aspects related to the operations and governance of an academic institution are viewed and explained from the cybernetic perspective of self-regulation (Birnbaum, 1988). This is contrasted by the belief that well-developed feedback channels are essential to successful cybernetic leadership (p. 188) and the creation of these channels constitutes good management (Birnbaum, 1988). Essentially, successful cybernetic leadership revolves around nurturing high levels of environmental perception. Cautioning

cybernetic managers not to over-manage and to "first, do no harm" (p. 199), Birnbaum (1988) builds on the cybernetic concept of self-regulation arguing that "any artificial intervention to handle a disruption could destroy the controlled relationships within the system" (p. 224). Strikingly, Birnbaum composed his cybernetics-based principals of academic leadership in 1988 and they seem to be increasing in relevance. Former Harvard president Derek Bok's 2013 book *Higher Education in America* points out that in contrast to academic leaders of the 19th and early 20th century who commanded significant power to make dramatic and occasionally autocratic changes; a strategic choice type model (Child, 1972); contemporary academic leaders perhaps behave in a cybernetic manner: They are preoccupied with political, symbolic, and fundraising roles, delegating many operations to lower administrators and trying to gently solve problems without major political repercussions (Birnbaum, 1988; Bok, 2013).

Hilbun (2013) conducted a three-institution multiple case study using the organizational adaptation perspective that parallels the work of Breneman (1994), Sporn (1999), and Gandre (2001). However, unlike Sporn's (1999) research where each institution of varying types faced a unique challenge, Hilbun's (2013) assessment of liberal arts colleges focused on one specific environmental challenge: The Great Recession of 2008 (Hilbun, 2013). Through documentation and interviews of leaders and constituents of the focal institutions, Hilbun (2013) examined each institution's responses to the economic downturn, how those responses played out, and members' perceptions of those responses (Hilbun, 2013). She focused particularly on themes of mission compromise, technology in education, branding of identity, and the importance of power in leadership (Hilbun, 2013). The organizational adaptation theories chosen in this study were resource dependence, population ecology, symbolic action, life cycles, and cybernetics, and her findings consistently "mapped" onto concepts in the theories (Hilbun, 2013). One of the most

intriguing concepts of this study from the standpoint of organizational adaptation in higher education involved the conception of enrollment. As an issue unique to higher education, would the theoretical models consider students a "resource", an "environmental factor" or even an "outcome"? Hilbun (2013) addresses this question: "[population ecology and resource dependence] blended and created a more practical question that faced many institutions: were there enough interested students (environmental need) who were also capable of contributing revenue to the institution (resource)?" (p. 232)

A second interesting conclusion from Hilbun's (2013) study equated liberal arts colleges to the cybernetic models' "tightly coupled systems" (p. 236). Citing the unique and often specialized missions of liberal arts institutions, any organizational actions had profound effects on the entire organization in a way that might not be the case at larger institutions (Hilbun, 2013; Manning, 2018; Sporn, 1999). This emphasis on specialized missions is also a theme in Gandre's (2001) historical studies of conservatories. Music programs with specialized missions may be considered "tightly coupled" and thus, more vulnerable to managerial errors than institutions with more wide-ranging missions (Gandre, 2001; Hilburn, 2013; Miller, 1993). Institutional size was an important consideration in both studies (Gandre, 2001; Hilburn, 2013).

Although Bastedo (2012) claims that organizational studies have fallen out of favor with higher education researchers in recent years, scholarship production indicates otherwise. Kathleen Manning's (2018) book *Organizational Theory in Higher Education* presents a new generation of students and practitioners with overviews of classic models, such as strategic choice (Child, 1972) and newer developing models, such as the spiritual model and the feminist and gendered model (Manning, 2018). Other scholars such as Neumann (2012) address organizational cognition in higher education, and Bastedo's (2012) monograph includes

organizational approaches to contemporary issues in higher education such as globalization, rankings, and diversity. Higher education futurist Bryan Alexander (2020) emphasizes the importance of environmental perception postulating that in the volatile, uncertain, complex and ambiguous environment of contemporary higher education, "an institution will need to expand or in some cases develop for the first time a strategic intelligence capacity in order to get the best information about student interest and labor market shifts" (Alexander, 2020, p. 226). Alexander's (2020) work does not specifically address adaptation, but rather, an organizational perspective on specific challenges, trends, and institutional sagas that can be instructive to occupants of all higher education roles.

Currently, there is no specific literature that examines higher music education programs and institutions from the organizational adaptation perspective, however, one of the most interesting studies on music institutions in higher education that holds great relevance for this study is Gandre's (2001) dissertation on independent music conservatories. Gandre's (2001) historical approach examined the genesis and survival of the seven independent American music conservatories from their founding to the 21st century and addressed the effects that leadership, governance, finance, faculty, location, and other factors had on the longevity of these institutions (Gandre, 2001). Through archival documents and interviews he examined the seven still-independent conservatives of Boston Conservatory, The Cleveland Institute of Music, The Curtis Institute of Music, The Juilliard School, The Manhattan School of Music, New England Conservatory, and San Francisco Conservatory (Gandre, 2001).

Though Gandre (2001) was chiefly concerned with crafting a historical narrative and did not include any kind of organizational framework, his study is in essence a population ecology-based study (Aldridge, 1979). He examines factors that led to the survival of some organizations

in the set and to the mortality of others (Gandre, 2001). Because of the longevity of his study and the incorporation of more than 100 years of source material, Gandre's work marks a more purist application of population ecology concepts than any study over a shorter time frame could accomplish. Therefore, his final conclusion can be framed in the language of organizational adaptation:

> The biggest threat to the survivability of any of the conservatories is the lack of knowledge among interviewees, often senior administrators, of other conservatories. Without an understanding of the strengths and weaknesses of other similar institutions, decisions are likely to be made in a vacuum, without benefit of others' experiences, others' successes, and other's mistakes. (Gandre, 2001, p. 373)

In essence, poor environmental perception and ineffective "information systems" posed the greatest existential threat for conservatories' survival in the future (Aldridge, 1979; Gandre, 2001).

Because this study analyzed music conservatories, it represents an important work for considering the organizational adaption of tertiary music programs. Conservatories compose a small but extremely important segment of the higher education music organization set and have historically produced a disproportionate share of the most influential musicians in a given time (Gandre, 2001). Any historical research about the adaptation capabilities of conservatories acts as a bellwether for higher education music programs as a population.

The Digital Revolution in The Music Industry

In order to properly contextualize and understand the paradigm-shifting disruption that occurred in the music industry around the turn of the 21st century, a brief overview of the economic history of music is required (Tschmuck, 2017; Young, 2018). Economist Peter Tschmuck (2017) partitions the history of the music industry into five phases: "the era of patronage, the era of publishing, the era of broadcasting, the era of the recorded music industry,

and the era of the digital music industry" (p. 9). Music had historically been a relatively rare profession in European societies (Gandre, 2001; Young, 2018) and prior to the industrial revolution, "professional" musicians most frequently found employment through aristocratic benefactors or the church (Stanley, 2016; Tschmuck, 2017).

Though technological revolutions had always affected musicians and the economic activity surrounding music, the construction and growth of a commercial music industry in Tschmuck's (2017) "era of broadcasting" beginning in the 1920s, followed by dramatic technological disruption in the "era of the digital music economy" circa 1999, holds the greatest relevance for contemporary higher music education (Krueger, 2019; Young, 2018), and is the subject of this literature review.

The revolution in the late 1990's consisted of three technologies destined to profoundly impact the music industry: digital recording, compression-decompression software, and the internet (Fisher, 2004; Passman, 2014; Tshmuck, 2017). Entertainment industry data analysts Michael Smith and Rahul Telang (2016) refer to this confluence as the "perfect storm" (p. 59); a set of technological changes "fundamentally different from those that came before them" (p. 18). These technologies would affect each sector of the music industry and disrupt well-established business models (Fisher, 2004; Krueger, 2019; Norgård, 2018; Smith & Telang, 2016).

The Recorded Music Business

Recording technology on a commercial scale revolutionized the musical art form beginning with Edison's early inventions in the 1890s (Tschmuck, 2017). Immediately, it presented an inherent challenge to music publishing due to the replication of copyrighted musical works. Many current issues in music law and the economics of the entertainment business have their roots in these early years (Fisher, 2004; Passman, 2004; Young, 2018). Importantly, the

U.S. Copyright Act of 1909 was the first legislation to directly provide a way for music creators to receive royalties from recordings of musical works (Tschmuck, 2017). In the 1920s, record companies began to experience tremendous growth in sales of physical recordings and by mid-century, record sales were the standard metric of musical popularity and artistic success (Fisher, 2004; Passman, 2004; Recording Industry Association of America [RIAA], 2019; Tschmuck 2017). The recording sector of the music business crucially included not only the technical production of sound recordings, but the manufacturing and mass distribution of those recordings (Fisher, 2004; Tschmuck, 2017). These operations became more vertically integrated and consolidated through globalization and corporate mergers as the 20th century progressed, especially as demand for recorded music, driven by the rock artists such as The Beatles, surged in international popularity (Tschmuck, 2017).

Because record labels needed to spend significant amounts of money in the creation, manufacturing, distribution, and promotion of recordings, the record business required "hits" in order to be profitable (Mulligan, 2014). This caused labels to invest most of their resources in relatively few artists (Fisher, 2004; Young, 2018) since revenue streams from those "superstar" acts were required to subsidize support operations and the numerous artists that did not produce exceptional sales (Krueger, 2019). Mulligan (2014) explains: "Record labels, majors in particular, have large rosters of artists, many of whom do not deliver a profit for the label" (p. 6). Even in early music business scholarship, Hirsch (1972) identified the "overproduction and differential promotion of new items" (p. 650) as a key financial and organizational strategy that defined record labels. Negus (1998) further supports the common record label practice of retaining a large number of artists while concentrating resources on the few "stars receiving attention in terms of budgets and staff expertise" (p. 365).

Despite prevalent criticisms that record labels were powerful corporate entities and often treated artists unfairly (Fairchild, 2016; Fisher, 2004; Norgård, 2018), the high cost of creating recordings, manufacturing and distributing physical records, and promoting artists to wide audiences set a formidable barrier to entry for new artists and kept the business model relatively stable (Krueger, 2018; Tschmuck, 2017; Young, 2018). Fisher (2004) speaks to this apparent stability: "For half a century the only way recording artists could reach mass audiences was to sign on to 'major labels'" (p. 24). Simply stated, record labels possessed the power to treat musical artists as products and artists had very little ability to create recordings and build audiences without the involvement of record labels (Fisher, 2004; Krueger, 2019; Morris, 2014; Nordgård, 2018; Tschmuck, 2017; Young, 2018).

Beginning in the late 1990s however, the availability of high-quality, digital, home-recording equipment at ever decreasing costs allowed musicians to create recordings without the aid of a large budget, professional recording studios, or an expensive staff of engineers and producers (Born & Devine, 2015; Spilker, 2012). Audio compression technology, most popularly the *Motion Picture Experts Group* MPEG-3, or "Mp3", made it possible to replicate and store enormous numbers of these digital recordings on personal computers and digital audio players (Fisher, 2004; Smith & Telang, 2016; Tschmuck, 2017). The ability to digitally reproduce music would ultimately render the manufacturing arm of the record label business nearly obsolete (A. Bell, personal communication, August 27, 2019). Digital recording and audio compression technologies would not have been as disruptive however, without the rise of the internet (Fisher, 2004; Tschmuck, 2017), through which digital music files could be shared, stolen, sold, downloaded, webcasted, or streamed to any computer or listening device anywhere in the world (Fairchild, 2016; Fisher, 2004; Norgård, 2018; Krueger, 2019). An artist could now produce

music in a home studio and distribute that music via the internet, bypassing the traditional production, manufacturing, distribution, and promotion channels monopolized by record companies (Fairchild, 2016; Smith & Telang, 2016; Tschmuck, 2017). The advent of these three technologies; digital recording, compression and reproduction, and the internet; seemed initially to be a major boon for musical artists at the expense of recording companies, but writing prophetically in 2004, Fisher warned, “A well-known danger is that they will corrode the traditional ways in which artists have made money from their creations” (p. 68). Framed from an economic perspective, Smith and Telang (2016) highlight how these technological and economic changes are “altering the nature of scarcity in these markets and therefore threatening to shift the foundations of power and profit” (p. 14). In no segment of the music industry has this prophecy been more accurate, than music publishing.

Music Publishing

Artists had been earning income from the publication of musical compositions since the early 18th century when European copyright laws recognized ownership of compositions as intellectual property, and advances in lithography made large-scale distribution of printed music possible (Tschmuck, 2017). With the aforementioned arrival of recording technology centuries later, well-established music publishing companies worked with recording companies and lawmakers to construct a system of royalties, collected through performing rights organizations, to distribute money to music creators for the "performances” of their work such as replication, distribution, derivative works, and public performances encompassing broadcasting via radio and television (Fisher, 2004; Tschmuck, 2017). Interestingly, recording artists were not included in the distribution of income from musical copyrights until the most recent revisions to digital

copyright law - The Music Modernization Act of 2018 (Krueger, 2019; Music Modernization Act, 2018).

This tightly controlled system of revenue derived from copyrighted musical works, channeled through record labels and music publishers back to the creators and copyright holders, was effective during the period where corporations acted as gatekeepers and controlled the majority of the access to music creation and promotion (Fairchild, 2016; Krueger, 2019; Smith & Telang, 2016; Tschmuck, 2017). Fisher (2004) further articulates the importance of the dependable revenue streams from music publishing and physical sales of recorded music: "Not all of that money ended up in the pockets of the original creators of those recordings, but some did, and that portion was essential to attract potential creators into the business and to support them in their endeavors" (p. 31). Foreshadowing the fragility of this renumeration in the coming digital era, Nordgård (2018) points out, "one of the great powers the major record companies had was their control of distribution" (p. 42).

In 1999, the combination of digital music file sharing, made possible by compression technology and the internet, which allowed instant ubiquitous distribution, reached its first crescendo with the launch of *Napster* by Shawn Fanning (Fisher, 2004). Through *Napster*, users could exchange music files without paying for them, a clear violation of copyright law (Fisher, 2004). The record labels and music publishers were quick to respond, and the ensuing litigation resulted in the shuttering of *Napster* and other 'peer-to-peer' music sharing websites (Fisher, 2004). However, in its brief three-year lifespan *Napster* was immensely popular, attracting tens of millions of followers and sharing billions of files (Fisher, 2004). The threat posed by *Napster* and digital distribution to the traditional music industry business model was twofold. First, distributing music digitally eliminated the need for physical product sales, thereby endangering

one of the primary revenue streams for composers, performing artists, and the corporate structure that supported them (Fisher, 2004; Krueger, 2019; Smith & Telang, 2016). A second embedded threat was the ability of consumers to listen to copyrighted works either for free, or at internet broadcast royalty rates dramatically lower than radio or television rates, thereby lowering income for music copyright holders (Fairchild, 2016; Fisher, 2004; Krueger, 2019; Norgård, 2018; Passman, 2004; Tschmuck, 2017). Donald Passman's well-known book *All You Need To Know About The Music Business* has been a reference staple for musicians since its first edition in 1991. In the 2004 edition he summarizes what during the early 2000s was viewed by many in the music industry as a nearly existential threat: "The current mess is a situation where a technology has outrun the intellectual property holder's rights to control their works" (p. 376). The data on recorded music sales bear out this paradigm shift in music industry economics as the revenue stream model migrated from physical sales to digital distribution: Beginning in 2000, physical sales of compact disc recordings in the United States dropped sharply from $13.2 billion, representing 92.3% of all music sales, to $4.3 billion in 2009, representing 55.2% of all music sales (RIAA, 2019).

Sharing of digital music files online would become the model for distribution but there was little agreement within the music industry on how to deal with the new technology (Norgård, 2018). Fisher (2004) discusses the early attempts to integrate pre-digital business models with the burgeoning web-based music listening services through the Digital Millennium Copyright Act of 1999, explaining that Congress:

> recognized that it was equally important to ensure that the creators of music not be harmed by the new technology - in other words, that any disruption of the traditional systems by which they earn money would be repaired by new sources of revenue. (p. 104)

Despite this sentiment, inadequate and delayed efforts by the record companies themselves to create scalable, profitable, and legal online access to music downloads and streaming led to intervention by the major technology companies that have come to dominate the music and entertainment sectors (Krueger, 2019; Nordgård, 2018; Tschmuck, 2017). In particular, *Apple's* ability to sell hardware and software enabled them to create a legal system of digital music downloads predicated on their native devices (Nordgård, 2018). Indeed, following the widespread adoption of legal paid music downloads and legal music streaming, recorded music revenue began to rise again in 2010 (RIAA, 2019). Today, music streaming is the dominant format of recorded music consumption (International Federation of the Phonographic Industry [IFPI], 2019a, 2019b; Krueger, 2019; RIAA, 2019).

In ceding control of music streaming to technology companies, such as *Apple*, *Amazon* and *Spotify*, the music industry had fundamentally altered the nature of its revenue flows (Smith & Telang, 2016). Norgård (2018) details this shift:

> An increasing share of revenues from recorded music are no longer based on royalty rates from the consumption/licensing of music. Instead it is based on negotiations between the labels and internet service providers, with the outcome of these negotiations determined by the catalogue's size and value. (p. 76)

Implicit in this revolution is a decrease in the asset value of recorded music (Krueger, 2019). Music streaming has driven the asset value of recorded music toward zero, and therefore, the subscription model utilized by music streaming services must be subsidized by advertising in order for those companies to operate and compensate the copyright holders (Krueger, 2019; Nordgård, 2018). Additionally, technology companies with multiple product lines can subsidize the losses incurred by paying royalties to artists for music streaming with sales of hardware and software (Krueger, 2019). Nordgård (2018) describes the inherent tension in this new model in

which the technology companies "seem to simply want to capitalize on the traffic generated by consumption" (p. 110).

Despite very low payout from digital music streaming royalties for contemporary musicians, other sources of revenue derived from music publishing have benefited from the digital revolution in positive ways. The most pronounced of those is music synchronization, or licensing fees for the use of music in film, television, and video games, which has consistently increased over the last several years and is widely considered essential to helping artists acquire wider audiences (Krueger, 2019; IFPI, 2018, 2019a).

Though a deeper examinations of music piracy, recent litigation and legislation, and revenue flows from recorded and published music are beyond the scope of this discussion, there is one final major music industry change with implications for higher music education. The dramatic alterations to the recorded music and music publishing businesses caused by the digital revolution have had second-order effects on the live music business (Krueger, 2019; Tschmuck 2017; Young, 2018).

Live Music Business

In the late 19th century musical theater made "artist management and ticket sales indispensable parts of show business" (Fisher, 2018, p. 76). With the advent of recording companies, live concerts became a way to promote and sell physical copies of recorded music (Krueger, 2019; Tschmuck, 2017). Because artists and labels alike profited from the sales of physical recordings, record labels could afford to subsidize tours in order to keep ticket prices affordable for audiences (Krueger, 2019). As previously shown, music streaming and digital distribution significantly lowered the potential income from physical product sales and cut into potential publishing income for artists and labels (Krueger, 2019; Norgård, 2018; RIAA, 2019;

Tschmuck, 2017; Young, 2018). As a result, record labels attempted to acquire some of the revenue from artists' live performances through the "360 Deal" (Krueger, 2019; Nordgård, 2018). These kinds of arrangements "encompassing a full range of revenue streams and activities, may serve as an example of the eroding of agreements around roles and positions within the music industries" (Nordgård, 2018, p. 105). Additionally, ticket sales for live performances became the most important revenue source for artists (Krueger, 2019) driving concert ticket prices up by 190% between 1996 and 2018, compared to 59% for the consumer price index during the same period (Krueger, 2019).

Equity

A final effect of the digital revolution has been more hidden and parallels developments in higher education and American socio-economic life (Krueger, 2019; Mettler, 2014; Thelin, 2011): The music industry has become more unequal. Fisher, writing in 2004, describes the built-in inequality in the music industry circa 1990, when six major recording companies (*CBS*, *Warner*, *RCA*, *EMI*, *PolyGram*, and *MCA*) produced the vast majority of all music sold in the United States:

> Those companies have discovered or decided that it is more profitable to select a few individual performers and musical groups, promote them heavily, and market their recordings aggressively, than it is to spread resources more thinly over a larger set of musicians. Consequently, only a few musicians receive the exposure and support necessary to become stars and to earn correspondingly generous royalties. (p. 78)

The end result of these practices was a "winner-take-all" business in which a small number of artists accounted for the majority of all sales (Fisher, 2004; Tschmuck, 2017). As the rise of digital downloads and music streaming eroded the potential to capitalize on sales of recorded music (Tschmuck, 2017), artists increasingly turned to a live performance-based revenue model in which concert tickets, not record sales, composed the greatest share of their

incomes (Krueger, 2019). Though many artists, executives, and economists in the early 2000s were optimistic that a more democratized system of music distribution would decrease inequality in the music industry - the "long tail hypothesis" (Fisher, 2004; Mulligan, 2014; Nordgård, 2018; Young, 2018) - the reality has been markedly divergent. As Alan Krueger's (2019) extensive study of streaming data and concert ticket data reveals, the digital revolution has *increased* inequality for musical artists:

> In the post-Napster days, recorded music can be viewed as a way for artists to gain popularity, to increase demand for live performances. The consequence of this development has been to turn the music industry into even more of a winner-take-all affair and that has imperiled the livelihoods of middle-class musicians and workers in the music industry. (pp. 136-137)

Owing in part to the enormous barriers-to-entry posed by promotional costs, marketing, and the occasional serendipity that continue to play a crucial role in determining the success of musical artists in the streaming age, Fairchild (2016) concurs with Krueger's assessment: "Indeed, the logistics of this [promotion] can be so daunting that the 'winner-take-all' market in music in which 'nobody knows the reasons for success' remains heavily laden with serious risk and almost shocking levels of failure" (p. 450). Clearly, there is broad agreement across music business literature that although inequality was historically pronounced in the music industry (Hirsch, 1972), many aspects and downstream effects of the digital revolution exacerbate the "winner-take-all", or power-law distribution of income in each industry segment; live music, recording, and publishing (Fairchild, 2016; Fisher, 2004; Krueger, 2019; Nordgård, 2018; Tschmuck, 2017; Young, 2018).

These shifts in the music industry since 1999 have had profound impacts on every facet of musicians' livelihoods and career trajectories (Fisher, 2004; Krueger, 2019; Tschmuck, 2017). Nordgård (2018) concisely explains the significance of this change: "Digital change has

fundamentally reshaped the music industries' value chains, and the structures of the music industries have not only been reshaped, but that the role of the artists has changed as well" (p. 19). The sum total of the digital revolution in the music industry can now be considered in relationship to the aforementioned critical concepts for this study:

1) The music industry is the external environment for higher music education.
2) The music industry fits the theoretical construct of a turbulent environment.

Music Industry as the External Environment for Higher Music Education

From its earliest formal beginnings professional music education included a consciousness of music as a commercial enterprise (Gandre, 2001; Tschmuck, 2017). The shifting aristocratic patronage of musicians in the late 18th century proved the catalyst for a growing professionalization of musical training and the first formal organizations dedicated to the training of professional (not amateur) musicians began with the founding of the Paris Conservatory in 1784 (Tschmuck, 2017). The United States was soon to follow with the opening of the Boston Conservatory in 1832 (Gandre, 2001; Miller, 1993). A major portion of the missions of these early institutions included preparing musicians for the types of "employment opportunities" of their time - professional orchestras, opera companies, composers, and teachers (Stanley, 2016). Significantly, professional preparation in this relatively small range of subjects constitutes the vast majority of collegiate music programs *to this day* (CMS, 2014; Latukefu & Ginsborg 2019; Miller, 1993; Myers, 2016; NASM, 2009; Stanley, 2016; Tschmuck, 2017). Nevertheless, this inclusion of professionalism from the outset of music education at the college level has remained a key focal point, even as music programs spread out of conservatories and into institutions of all types (Miller, 1993; NASM, 1999).

Khandwalla (1977) further argues that in the case of higher education, an academic engineering department's "products" are its students and therefore it is in the engineering industry thus; A music program's outputs, in the form of students, become part of the music industry. Siwek's (2018) economic overview of the U.S. music industry directly includes the music education sector as a subset of music industry organizations. Research on student outcomes in music (Bennett, 2007, 2016; Born & Devine, 2015; Miller, et al., 2017; Mulligan, 2014; Myers, 2016; Young, 2018) also highlight students' natural position that they are occupants of roles within the music industry. Furthermore, continuous acknowledgement by music institutions (Berklee College of Music, 2020) and accreditors (NASM, 2020), emphasizing professional training in music confirm the wider music industry to be the environment in which music schools exist and therefore must be successful. Their success depends heavily on continuing to provide relevant and valuable education and training to future generations of musicians and employees who will populate the music industry environment.

The Music Industry as a Turbulent Environment

Turbulent environments are frequent foci of organizational research as they are common in many sectors of industry (Aldridge 1979; Child, 1972; Donaldson, 1996; Emery & Trist, 1956; Khandwalla, 1977; Pfeffer & Salancik, 1978; Powell, 1990). The previously described digital revolution in the music industry builds on a legacy of documented environmental turbulence. Paul Hirsch's 1972 study examined the "cultural industry" organization set of the film industry, the book industry, and the phonograph industry. Hirsch (1972) applied an organizational adaptation perspective and characterized the cultural sector as facing "highly uncertain environments at their input and output boundaries" (p. 1). A subsequent 1975 study by Hirsch of organizational effectiveness compared the phonograph industry to the pharmaceutical

industry focusing on the ability of each industry's major organizational actors to influence the legal and regulatory environment of that industry. This study was consistent with concepts from the resource dependence, strategic choice, and population ecology viewpoints. Hirsch (1975) concluded that the pharmaceutical industry had been far more effective in creating a "negotiated" environment through copyright and ownership than the phonograph industry. The complexity of the music industry environment therefore has been previously acknowledged in the organizational literature. Smith and Telang (2016) support the premise that the digital revolution whereby technology "changed the competitive landscape" (p. 3) has only increased this environmental turbulence.

Comparing the music industry to the work of Aldridge (1979) and Emery and Trist (1965) yields two questions: (a) Does the music industry exhibit increasing interconnection? and (b) Does the music industry exhibit an increasing *rate* of interconnection? (Aldridge, 1979). Tschmuck's (2017) description of the three sectors of the music industry; the recorded music sector, the music publishing sector, and the live music sector; addresses the first point. The level of interaction between sectors is important to the concept of turbulent environments. Tschmuck (2017) chronicles the increasing consolidation of music and entertainment companies in the latter half of the 20th century, describing them as an "oligopoly" (p. 26). Aldridge (1979) offers further insight on oligopolies as "[an] environment in which a small number of organizations possess enough power to collectively influence the outcomes [that] develop tacit agreements among member organizations to collectively manage problematic interdependencies" (p. 317). Descriptions of the music industry as an oligopoly are supported by Krueger (2019), Fairchild (2016), and Smith and Telang (2016), with a new of amount of uncertainty as technology companies have entered a marketplace once populated solely by entertainment companies (Smith

& Telang, 2016). Tschmuck (2017), Krueger (2019) and Smith and Telang (2016) all describe how the digital revolution in the music industry has created a more elaborately interconnected web of transactions and organizations within this oligopoly and across the three sectors of the business. Tschmuck (2017) elaborates:

> Digitization has forced majors [record companies] as well as indies [independent record companies] to reconfigure their business models. Instead of focusing on record production and distribution alone the companies of the recording industry entered the licensing business, artist management, and even in the live music business, merchandising and branding (p. 113)

Fairchild's 2016 paper on music industry history and economics concurs: "one largely overlooked result of the turmoil in the music industry since 1999 has been that the range of tie-ins a record company might be able to link to an artist has become unfathomably wide" (p. 467). The first condition of a turbulent environment has been met - there is an increasing number of connections between organizations and actors within the music industry environment.

Evaluating the increasing *rate* of connections begs consideration of the history of the music business. While Hirsch (1972) described the uncertainties present in the music business decades ago, there is almost unanimous consensus that the digital revolution practices of downloading and streaming music represented a complete and total paradigm shift from which all future directions must be based (Fairchild, 2016; IFPI, 2018; Krueger, 2019; Tschmuck, 2017). In concluding his histories of the three music industry sectors by describing their accelerating interconnectivity, Tschmuck (2017) further observes: "a convergence of the three music subsectors – publishing, recording and live business - to a single music industry support network for artists" (p. 192). Alan Krueger (2019) articulates this well in his landmark book *Rockanomics*: "Streaming is the present and the future technology of music. But the distribution business model will likely evolve and change directions for years to come" (p. 201). In a

statement directly reflecting the definition of a turbulent environment (Aldridge, 1979; Daft & Weick, 1984; Pfeffer, 1978), Krueger (2019) comments specifically on the state of uncertainty in the music streaming revolution: "it is unclear what form successful business models will take" (p. 203). Khandwalla's (1977) description of conflicting information within the environment is particularly true of the digital music era; the paradox of access derived from greater opportunities for music creators and greater difficulty in monetizing that opportunity (Krueger, 2019; Smith & Telang, 2016) provides such conflicting information to all participants in the music industry environment. This uncertainty draws from the increasing rate of connections and aligns with near perfection to the theoretical conditions for environmental turbulence established by Emery and Trist (1965), Daft and Wieck (1984), Pfeffer and Salancik, (1978) and Aldridge (1979). Therefore, both conditions have been met, firmly establishing the music industry, as it exists currently, as a turbulent environment. In order to frame the organizational adaptation strategies of higher music education in response to this turbulent music industry environment, the digital revolution in the music industry must be evaluated from the perspective of higher music education.

Higher Music Education Organizational Adaptation Strategies

Research on recommended and realized reformation in higher music education is a rich and diverse area of scholarship. As Christensen and Eyring (2011) describe "success in an increasingly competitive [turbulent] environment requires each institution to identify and pursue those things it can do uniquely well" (p. 29). In framing music units' efforts as organizational responses to the digital revolution and to contextualize the concepts of organizational adaptation strategy, higher music education can be examined through familiar domains common to virtually all areas of higher education. Those domains include curriculum, co-curriculum, faculty,

admissions and access, online learning, governance, facilities, and external partnerships. The summation of a music unit's activities in each of these areas constitute their organizational adaptation strategy as previously described. Some themes contain a plethora of scholarship on specific reforms and strategies while others are notably void of documented action. Therefore, a reliance on more general higher education trends is necessary to describe potential organizational adaptation strategies in the context of the music discipline.

Curriculum

Enacting curricular reform in all of higher music education is a critical component of organizational adaptation strategy. As Bastedo et al. (2016) illustrates: "curricular change can also be understood as an inhabitant of the organizational culture that supports it" (p. 77). Though nearly unanimous on the need for curricular reform, higher music education scholars view curricular reforms in additive, subtractive, and substitutive forms. These perspectives stem from a growing chorus of educators, researchers, professionals, and students that have called for significant music curricular reform in light of the new digital music economy (Bartlett & Tolmie, 2018; Bennet, 2007, 2016; CMS, 2014; Kardos, 2018; Miller et al., 2017; Myers 2016, NASM, 2005; Sarath et al., 2016; Tschmuck, 2017; Young, 2018).

The areas of greatest alignment in the literature on this needed reform revolve around "portfolio careers": The idea that students should learn the musical and non-musical skills needed to operate in many different areas of music simultaneously, creating a patchwork of income sources and activities (Bartlett & Tolmie, 2018; CMS, 2014; Kardos, 2018; Latukefu & Ginsborg, 2019; Myers, 2016, NASM, 2005; Tschmuck, 2017). Bennett, Macarthur, Hope, Goh, and Hennekam (2018) describe this dichotomy: "A traditional curriculum also perpetuates the linear model of training that prepares students for mythological careers as performers or creators

rather than the protean career that is likely to be the reality" (p. 248). Whereas the music student of the past could rely on well-established paradigms for career development such as symphony orchestra positions, studio session work, music publishing royalties from composition, or record sales as either an artist or member of an artists' support team (Gandre, 2001; Stanley, 2016; Tschmuck, 2017), the music student of the 21st century must take a significantly more active role as the manager of their career (Morris, 2014; Young, 2018). Morris (2014) emphasizes that contemporary musicians must engage in "cultural entrepreneurship" in which they work to "convert a lack of financial resources into economic success through cultural capital and artistic influence" (p. 276).

The National Association of Schools of Music (NASM) is the specialized accrediting organization for higher music education in the United States. Established in 1924, it is one of the oldest specialized accrediting bodies, and since its inception has been heavily engaged in music program improvement (NASM, 1999). In the organization's 2005 report on the future of art music, several "forces producing pressure" (p. 9) on higher music education are identified, in particular, as they relate to music outside the major commercial genres. One revealing pressure directly supports the importance of entrepreneurship in the new music industry: "Musicians in training do not learn the full range of skills they need to be successful. Many are increasingly concerned about the need to develop a kind of entrepreneurialism among young professionals" (p. 13).

By 2013, The College Music Society (CMS), a leading professional organization for higher music education, launched a Task Force on the Undergraduate Music Major (CMS, 2014). A powerful conclusion of this task force was the implication that a severe gap existed between

the skills that the new music industry demanded and the content of music programs in higher education:

> Without such fundamental change, traditional music departments, schools, and conservatories may face declining enrollments as sophisticated high school students seek music career development outside the often rarefied environments and curricula that have been characteristic since music first became a major in America's colleges and universities. (p. 2)

The recommendations from this research on curriculum in higher music education are clear. Curriculum must include more business training, greater access to industry internships and experiences, universal applications of technology for creation and promotion, and "preparation to maintain competencies and industry knowledge as self-directed learners" (Bennett, 2016, p. 391). Tschmuck (2017) suggests that institutions may ignore these recommendations at their peril:

> Artists need more skills than just making music at a high technical level. They have to understand the underlying economic principles of the music business and how the music industry works. It is the obligation of music education institutions to provide such knowledge and skills for a new generation of artepreneurs. (p. 193)

The language of curriculum reform literature is strikingly additive. Musicians and scholars acknowledge the dire need to include more skills in post-secondary music education. If higher music education follows the curriculum expansion observed by Gumport and Snydman (2002), music schools and departments should exhibit significant growth in their course catalogs to accommodate the inclusion of these additional skills. Indeed, institutions and programs working to present students with an "option rich environment" as recommended by the College Music Society (2014, p. 30) would demonstrate such a supplemental approach.

Less common is literature focusing on whole-scale rebuilding of existing curriculum. A study at one Australian university showcases the reconceptualization of a music theory course to "achieve the learning outcomes valued by multicoated approach, and a pluralistic music culture

rather than a traditional approach" (Davidson & Lupton, 2016, p. 178). The course integrated performance, composition, and improvisation in a music theory context whereby students drew connections to musical concepts across cultures and genres and performed multi-genre compositions. This study highlights how institutions can avoid adding new courses by reforming existing offerings. Examples in published literature of music programs discontinuing courses are rare, however Gandre's (2001) study on conservatories documents decades of deliberation by conservatory presidents and faculty on how to deal with changing enrollment and student interest. Recently, Oberlin Conservatory announced a plan to admit 100 fewer conservatory students in an effort to reduce costs (Toppo, 2019). Efforts such as Oberlin's mark clear attempts at a subtractive approach to music program reform and an organizational adaptation strategy of specialization (Aldridge, 1979; Child, 1972).

Co-curriculum

"The classroom is not the sole province of student learning" (Long, 2012, p. 1). Co-curriculum and student affairs have a history nearly as complex as that of higher education (Hevel, 2016; Thelin, 2011) and given the myriad calls for inclusion of learning activities in higher music education as a response to the digital revolution (Myers, 2016), co-curriculum is a natural area to expect adaptation and reform to occur. Similar to curriculum reform literature, research on co-curriculum in higher music education is often additive in nature. Much research in this area centers around the recommendations for entrepreneurial learning. One particularly effective effort, admittedly a mixture of curricular and co-curricular projects, is Kelman's (2015) *Youth Music Industries*. This pedagogical concept involved students participating in music industry projects and creating a community of practice to engage in building entrepreneurship skills applicable to the music industry and creative fields (Kelman, 2015). The end result was the

development of a “emerging professional learning model” (p. 281) with seven design principals: (1) networking is fundamental to learning; (2) focus on setting goals and completing tasks; (3) building effective interpersonal skills; (4) engaging in reflection and self-feedback; (5) acquiring domain knowledge in specific contexts; (6) learning about industry professionalism; and (7) learning about career sustainability (Kelman, 2015). Another similar project in India focuses around the college rock festival circuit as a community of practice to build entrepreneurship and performance skills (Kelman & Cashman, 2019). By engaging students as performers and promoters, educators were able to cultivate the types of real-world skills sets called for by proponents of music curricular reform (Bennett, 2007; CMS, 2014; Myers, 2016; Sarath et al., 2016; Tschmuck, 2017).

Similar to Kelman’s (2015) *Youth Music Industries* is the increasing prevalence of student-run record labels: a mixture of curricular and co-curricular hands-on learning whereby students participate in the business aspects of promoting recordings and artists through creating commercial releases subsidized by the institution (Berklee College of Music, 2020; Butler, 2007; Tompkins, 2010). Particular standout examples are Drexel University, University of Memphis, and the Berklee College of Music. In every case these projects increase students’ rate of job placement in music industry companies, and provide valuable experiences for the artists (Butler, 2007; Tompkins, 2010). According to Butler (2007), particular significance is given to the fact that “there are insufficient industry resources available within a 300-mile radius to accommodate a majority of the music industry student body or to meet the needs of their areas of concentration” (p. 102). This implies that for institutions located outside of the commonly acknowledged "music-hubs” of New York, Los Angeles, and Nashville (Kruger, 2019; Siwek,

2019), the inclusion of entrepreneurial learning projects in co-curriculum is crucial to compensate for lack of local exposure to the music industry.

Latukefu and Ginsborg (2019) highlight an interesting issue surrounding the nature of "portfolio careers". Their qualitative study on one conservatory in the UK reveled substantial differences in how students and faculty conceptualized "portfolio careers", and therefore, the nature of training for the contemporary music economy. Most interestingly, some of the interviewed students felt that the very nature of music education support staff work; booking concerts, organizing festivals, logistics, and other business tasks; prevented the students from engaging in this work themselves and losing the opportunity to practice the business and entrepreneurial skills they felt they needed (Latukefu & Ginsborg, 2019). This directly supports Kelman's (2015) research and further advocates for a particular co-curricular adaptation: the necessity of involving students in the non-musical activities in higher music education.

Examples of discontinuing co-curriculum are rare in higher music education literature, but unlike curriculum, the co-curriculum is particularly suited to adapting quickly to student demand (Long, 2012), therefore, music units may engage in the modification of programs or discontinuation of co-curricular programs without substantial student or faculty interest. Although co-curricular programming varies heavily across institutions, music units may demonstrate additive or subtractive behavior as a component of their organizational adaptation strategies.

Faculty

Literature directly concerning higher music education faculty is relatively scarce. Jörgensen's (2010) macro literature review of higher music education found that research concerning faculty's creative activities, research, and change as institutional processes accounted

for only 8% of the studies in the higher music education field. As of this writing, there are no direct studies linking faculty hiring to music industry change and organizational adaptation as advocated for by music program reform scholars (Sarath et al., 2016). There are, however, bodies of literature on higher music education faculty evaluations and the training of future faculty (Parkes, 2015).

From the organizational adaptation perspective, higher music education can be contrasted with increasingly neoliberal trends in U.S. higher education (Al-Gharbi, 2020). According to the American Association of University Professors (AAUP), in 2018 73% of faculty across U.S. higher education were not on the tenure track. This compounds problems with graduate education and reinforces structural discrimination (Posselt, 2016). Part-time and contingent faculty in higher education are directly related to organizational adaptation strategy as they "give institutions the ability to adapt to environmental, programmatic, and technological changes" (Hendrickson et al., 2013, p. 316). Remarkably, despite the increase in non-tenure track faculty over the last several decades (Bok, 2013; Hendrickson et al., 2013) the ratios of faculty employment status in higher music education have remained extraordinarily stable. The HEADS report from 2004 list 46% of music faculty as off the tenure stream and 54% on the tenure stream, and in 2019, those percentages are listed by HEADS as identical to the 2004 ratios; 46% and 54% respectively.

Referencing the digital revolution and the scholarly consensus on music curricular reform, the role and character of higher music education faculty may seem now on the verge of significant change (Bennett, 2007, 2016; Bennett et al., 2018; CMS, 2014; Harrison & Grant, 2016; Myers, 2016; NASM, 2005; Young, 2018). Sarath et al. (2016) assert that faculty hiring

should be expanded to include experts in various musical idioms outside traditional classical or jazz music.

Miller's (1993) work on music unit administration, although pre-dating the digital revolution, observed that "the process of creating a music department becomes one of building from the most relevant specialties and working outward toward less crucial ones" (p. 101). This would suggest that music departments may have strong incentives to alter the make-up of their faculty if "relevant specialties" are perceived to change. Myers (2016) further specifies:

> Administrators need to empower faculty to enter into conversations that recognize changing music practices and content knowledge for students' career success, and to consider how students may best learn and in environment characterized by creativity, diversity, and integration. (p. 305)

Miller (1993) additionally highlights the unique disposition of higher music education for adding faculty: "This is especially compelling in music because of the conspicuous use of part-time faculty to accommodate as many specialties as possible…with increasing frequency, adjunct faculty are hired to augment expanding programs" (p. 106). These scholars clearly identify both full-time and part-time faculty expansion as an organizational adaptation strategy consistent with generalization and decentralization (Child, 1972; Donaldson, 1996; Gumport & Snydman, 2002).

Scholarship across higher education highlights several large-scale trends that may work against this tendency of music faculties to continuously expand. As Hendrickson et al. (2013) illuminate, a large percentage of senior faculty will advance into retirement over the next 15 years, and due to the broad shift toward replacing tenured faculty with contingent faculty (AAUP, 2018; Al-Gharbi, 2020; Bok, 2013) these lines may be replaced with contingent positions or eliminated entirely. Demographic predictions in the U.S. that trend toward contraction of the traditional college age population also point to a potentially dramatic

enrollment decline across all higher education sectors (Grawe, 2018). Furthermore, the increasingly career-oriented mindset of students and the renewed challenges to higher education's value proposition (Alexander, 2020; Mrig & Sanaghan, 2018; Thelin, 2011), as well as the urgent need for higher music education reform espoused by scholars and economists alike (CMS, 2014; Kreuger, 2019; Myers, 2016; Tschmuck, 2017) may contribute to a tendency for music units to downsize their faculty ranks or attempt to achieve a deeper but narrower program focus to compete with other institutions (Aldridge, 1979; Sporn, 1999; Toppo, 2019).

Admissions and Access

One crucial and positive result of the digital revolution in the music industry has been an extraordinary increase in accessibility. As the cost of recording, distributing, and promoting music has fallen dramatically, a greater number of people have the ability to create music and participate in the "construction of their cultural environment" (Fisher, 2004, p. 31). The removal of social and financial barriers to access cultural capital is a guiding philosophy for many institutions of higher education, especially liberal arts-focused institutions (Bok, 2011; DelBanco, 2012; Stanley, 2016; Thelin, 2011). This new digital access extends worldwide, and Bartlett and Tolmie (2018) suggest that the globalized music industry has strongly affected music student demands:

> With the global audience shift away from western classical music to a preference for popular music, conservatories and university music departments have been challenged to meet a growing student demand for training in mainstream contemporary commercial music styles. (p. 198)

Furthermore, the benefits of multi-genre training are well-documented in literature on curricular reform (Bennet, 2007, 2016; Creech et al., 2008; CMS, 2014; Davidson & Lupton, 2016; Kardos, 2018; NASM, 2005). Creech et al. (2008) continue: "Institutions where many musical genres cohabit have an ideal opportunity to broaden musical awareness amongst their

students, providing opportunities for multi-genre communities of practice to evolve which have the potential to privilege musical versatility" (p. 19). The connections between musical and demographic diversity are best illustrated by Born and Devine's (2015) study on conservatories in the U.K.: The socio-economic diversity of music conservatory students increased significantly following the inclusion of hip hop and music technology-based degrees (Born & Devine, 2015).

Increasing diversity in the music program student body in almost every case would be predicated on reforms to audition practices: A recent survey of NASM accredited institutions found that 92.6% of responding faculty indicated that in their programs a performance audition was required for admission (Royston & Springer, 2017). Scholars advocate heavily for substantial reform in music school audition processes since the preeminent focus on European classical music not only disadvantages those students from lower socio-economic backgrounds without access to private instruction during their formative years, but also perpetuates "viewing the exclusivity of school music as an expression of the continued funding of race" (Koza, 2008, p. 154). The present system of overt racial discrimination resulting from the exclusion of musical styles such as hip-hop, global folk music, and popular dance music, as well as the scarcity of Afro-centric music such as jazz in curricula other than within "jazz studies" programs, contributes to the lack of diversity in tertiary music more generally and supports broader narratives of systemic racism within U.S. higher education (CMS, 2014; Myers, 2016; NASM, 2005; Palmer, 2011; Sarath et al., 2016; Thelin, 2011; Wilder, 2013).

Surprisingly, research documenting audition and admissions reforms in favor of greater stylistic inclusion is lacking from the majority of the literature. Though there is a robust body of research on music teacher education and by extension, music education majors, in the collegiate setting (Edgar, 2018; Fitzpatrick, Henninger, & Taylor, 2014; Royston & Springer, 2017), very

little research focuses on the audition and admissions process. Though this research makes clear that in contrast to music education faculty, "applied studio faculty hold the majority of audition and admission screening responsibilities at many institutions" (Royston & Springer, 2017, p. 222), the inclusion of music apart from traditional European classical music is rare at best. In a second recent study on the audition process for music education majors, the findings indicate many students "had significant experience with non-western art music, but even though this experience might be valuable to their future teaching careers, it usually was unacknowledged or even actively discouraged during the audition preparation process" (Fitzpatrick et al., 2014, p. 121).

Admissions reforms in higher education as organizational adaptation strategies have been quite successful at increasing diversity in other specialized fields. The Ohio State University College of Medicine, confronting a poignant lack of diversity in medical school students, adopted a systematic eight-step admissions reform process over several years, resulting in a student body mirroring the racial, gender, and ethnic makeup of the overall population (Capers, McDougle, & Clinchot, 2018). Such reforms included an emphasis on qualitative metrics such as interviews, and specific involvement of additional reviewers to correct for bias (Capers et al., 2018). In the field of music education, Royston and Springer (2017) recommended inclusion of an interview in addition to the musical audition. Further advocates for diversity argue for the hiring of faculty who embody the performer/composer/improvisor teaching artist in non-classical genres as well as ongoing professional development for faculty in new fields as a way of broadening the diversity of the faculty that are presented to auditioning students (Sarath et al., 2016).

Although the advocacy for audition and admissions reform is directed at *all* institutions, regardless of curricular focus (Bennet et al., 2018; CMS, 2014; Fitzpatrick et al., 2014; Myers, 2016; Young, 2018), an antithetical adaptation strategy, specialization, would advocate for creating more difficult audition requirements and higher barriers to entry in an effort to improve selectivity. Creating a niche based upon selectivity, and sometimes, musical focus, has been a strategic goal of multiple conservatories and music programs (Gandre, 2001; Miller, 1993; Stanely, 2016). Indeed, several of the oldest and most well-known music institutions such as The Julliard School and New England Conservatory have historically adopted such a strategy (Gandre, 2001). This organizational behavior mirrors that of selective liberal arts colleges and universities throughout higher education (Thelin, 2011) and despite renewed research on the institutional discrimination created by selectivity-increasing tactics (Poon, 2020) and college-ranking systems (Ngo, 2020), this organizational adaptation strategy remains viable.

Online Curriculum

Organizational adaptation theories expound on the methods used by organizations to mitigate competition (Pfeffer & Salancik, 1978). The growth of the international music market, owing to the digital revolution, implies that a greater number of young musicians worldwide may seek training in the higher education setting (Choi, 2009; Kertz-Welzel, 2018). Former Harvard president Derek Bok (2011) elucidates the many mixed results of competition in the U.S. higher education system, ranging from over-accommodation of students to substantial innovation. This is increasingly true in higher music education. Institutions and programs are competing globally for students and although significant innovation abounds, the growth in programs, majors, and flexible degrees challenges musical core values and academic credentialing in music (European Agenda for Music, 2018; Miller, 1993; Stanley, 2016; Young, 2018). In addition to competition

from within the higher education sector, higher education music programs face growing competition from the for-profit online sector. For-profit online education emerged in the late 1990s and by 2013, online learning had become so ubiquitous in higher education that over 70% of degree-granting higher education institutions offered at least one online course (Bastedo et al., 2013).

It has always been the case that no musical degree or credential is required for successful music careers (Bennett, 2007; Kruger, 2019; Salonen, 2010) and thus, with the dramatic increase in the cost of higher education (Bastedo et al., 2016; Bok, 2011; Mettler, 2014) during the same time period as the digital revolution, and the extensively researched "skills gaps" between many higher music education programs and the music industry, (Bennet, 2007, 2016; CMS, 2014; Creech, et al., 2008; Myers, 2016; Teague & Smith, 2015), a robust online sector has developed outside of higher music education. For-profit websites such as truefire.com and artistworks.com offer high-level online instruction with well-known musicians across dozens of instruments and genres (Artistworks, 2019; Truefire, 2019). Though no formal academic credential is awarded, students regularly increase their skills significantly for a fraction of the cost of higher education tuition (Artistworks, 2019; Truefire, 2019). Some higher music education institutions, notably, Berklee College of Music, The Juilliard School, and the University of West London, have invested considerably in building online curricula meant for a far wider market than their physical institutions could serve (Berklee College of Music, 2019; The Juilliard School, 2019; University of West London, 2019). Programs with such well-established reputations are able to capitalize on their renown and capture significant market share for those seeking affordable options for post-secondary music training. Similar to trends in other disciplines, such as

computer science, the move to online education may threaten institutions without famous faculty or other embedded recruiting advantages (Bok, 2011; Christensen, & Eyering, 2011).

Though there exists a substantial literature gap in documenting the efficacy of these online music programs both inside and outside of the higher education sphere, Waldron's 2013 study of online music learning programs reported that the students in these programs did not feel that the online experience replaced traditional and experiential learning, but rather, augmented their in-person experiences with music. Similar to curriculum and co-curriculum areas of organizational adaptation strategy, creating, discontinuing, or combining online programs would correspond to organizational adaptation strategies of decentralization, generalization, specialization, or formalization.

Governance and Leadership

A wealth of literature exists on higher education governance and leadership from scholars (Bastdeo 2012; Hendrickson et al., 2013; Thelin, 2011), former college presidents (Bok, 2013; Bowen, 2011), and even organizational researchers (Cameron, 1984; Manning, 2018). In higher music education this area of research is far less populated, but notable examples tie into the themes of the digital revolution and organizational adaptation strategy. Similar to Khandwalla's (1977) organizational research on the leaders of major corporations, relevant literature on academic leadership in music has focused on the unique experiences of music unit leaders balancing the roles of administrator and musician (Niezen, 2014; Sorenson, 2007).

From the perspective of music program change, Niezen's (2014) study sought to investigate how music leaders "perceive themselves within post-secondary music education in the midst of changes within the industry" (p. 236). Most pertinent in this study was the conclusion that "program initiatives were often viewed by those other than themselves as

creating a sense of ‘loss’ or taking away from traditional teaching” (Niezen, 2014, p. 237). In reveling that music unit leaders most often view themselves as working to strike a balance between innovation and tradition, Niezen (2014) supports research on resistance to change in music faculty (Miller, 1993; Stanley, 2016). Sorenson’s (2007) research on music leaders offers another potential line of questioning for additional study. In finding that “48% of music leaders list ‘faculty development’ as their least skilled role” (p. 137), almost half of music unit leaders appear to be ill-equipped to develop new talent and encourage programmatic reform.

Gandre’s (2001) previously mentioned study on conservatories is also a de facto study on music leadership and serves as evidence that music leaders experiment across the organizational adaptation strategy spectrum when faced with external and internal challenges. In Miller’s (1993) work, music unit leadership is presented within the context of the role of the department chair. One survey of music department chairs cited by Miller (1993) found that music department chairs rated “lack of resources” as their greatest challenge (p. 81). Although organizational adaptation is not directly addressed, music department chairs were asked “if you had the opportunity to bring about several changes in your department, what would they be?” (p. 80) and the responses fall in alignment with organizational adaptation strategy elements as described in this literature review: adding programs, adding faculty positions, dismissing faculty members, and upgrading facilities all were selected by more than 20% of respondents (Miller, 1993). Leadership and governance additionally provide opportunities for music leaders to engage in organization building, long-range planning, and defining the mission and goals of the organization (Child, 1972; Gandre, 2001; Manning, 2018).

Facilities

The literal footprint of higher education has expanded dramatically in the 20th century (Thelin, 2011). Institutions, particularly large research institutions, have added laboratories, research centers, technology parks, athletic facilities, dormitories, and amenities (Bok, 2011; Owen-Smith, 2018). Much of this expansion coincided with the major increases in enrollment dating from education policy initiatives in the mid 20th century such as the Serviceman's Readjustment Act (1944), the National Defense Education Act (1958) the Higher Education Act (1965) (Thelin 2011; Young et al., 1983). Research specifically on facilities in higher music education is entirely absent from literature, however, data on expenditures are collected from institutions willing to report such information to HEADS. In 2019 alone, reporting music units spent an average of $142,000 on renovations and nearly $3 million on new construction (HEADS, 2019). Clearly, higher music education is not immune from the boom in higher education facilities expansions. Gandre's (2001) study additionally documents trends commensurate with the era of higher education expansion: construction, mergers, consolidations, and renovations.

Organizational adaptation strategies concerning facilities build from these expansionist trends. Music leaders are clearly cognizant of the need to continuously upgrade and expand facilities (Miller, 1993) and the digital revolution's emphasis on technology-based idioms present a challenge for classrooms and concert halls constructed for a time in which the most music units taught exclusively European classical music (Kajikawa, 2019). As most music leaders operate within actual or perceived budgetary constraints (Miller, 1993), changes in facilities may be a revealing window into overall organizational adaptation strategies.

External Partnerships

Since the 1960s, service-based learning and partnerships between higher education institutions and their local communities have provided invaluable experiences for students and enriched relationships between institutions and local populations (Hendrickson et al., 2013). Many contemporary higher education institutions maintain a porous constellation of relationships between local, regional, national, and multi-national corporations, non-profits, and governmental organizations (Bok, 2013; Owen-Smith, 2018). Higher music education programs and institutions have long been deeply intertwined with the communities and cities that they call home. Some notable institutions, such as The Manhattan School even began as community music schools for children and adults (Gandre, 2001). The New England Conservatory has a centuries-old relationship with the Boston Symphony (Gandre, 2001). Miller (1993) argued that music leaders, in response to fundraising challenges, ought to pursue "New innovative relationships…between music programs and the community as a whole that would benefit both" (Miller, 1993, p. 85). The digital revolution provides additional motivation for music units to consider engagements and relationships beyond the campus.

Burton (2011) created an immersion program for music education students to gain the cultural competency needed in the music classroom through a partnership with another institution in Sweden. According to Burton's (2011) policy recommendations, a digitized and globalized music industry required higher education to "provide funds to support the development of internationally based collaborations" (p. 128). Others look to the research enterprise for potential relationships. Boehm's (2017) study on the potential for partnerships in the digital music economy highlights the lack of competition in audio technology as a potential opportunity for higher education: "Many of the collaborative projects in the area of music

technology simultaneously include partners from small and medium-sized businesses, cultural organizations and academia" (p. 131). As the music industry has become more deeply interconnected with technology, relationships with start-up incubators and technology companies (Stanford), and record labels and music festivals (Berklee College of Music), have become more common in music institutions (Berklee College of Music, 2020; Owen-Smith, 2018).

The MIT Media Lab, founded in 1980, has a unique business model: Private industry funds its operations in exchange for the chance to capitalize directly on inventions resulting from the Lab's research and experiments (Owen-Smith, 2018). The syncretic interplay between musicians, artists, filmmakers, and scientists has not only led the way in contemporary audio technology research but provided a new paradigm for the integration of academia, the for-profit sector, STEM fields, and the creative disciplines. Similarly, the University of Southern California recently launched the Jimmy Iovine and Andre Young Academy that focuses on "the intersection of four essential areas: arts and design; engineering and computer science; business and venture management; and communication" (University of Southern California, 2020, para. 4) in order to innovate both inside and outside the institution through internships and relationships with major firms.

A resurgence in research dedicated to the creative economy by firms such as *Sound Diplomacy* highlights the many potential community partners available to music units such as radio stations, non-profits, K-12 schools, performing arts centers, small venues, recording studios, libraries, festivals, museums, record labels, music promotion companies, and advertising firms (Sound Diplomacy, 2020). At both the local and international level, opportunities for partnerships are prevalent and as an organizational adaptation strategy, developing partnerships outside the music unit provides opportunity to discover new resource sources, distribute risk, and

move into new environments (Aldrich, 1979), while enhancing the educational experience through more learning options (CMS, 2014). Analogous to curriculum and co-curriculum, external partnerships of any nature can be created, discontinued, or formalized. In the latter case, music leaders would be expected to take a supervisory role over a new or pre-existing external partnership; an organizational adaptation strategy of formalization (Cameron, 1984).

Conceptual Synthesis

A final conceptual synthesis can now be constructed from the organizational adaptation literature, the music industry literature, and the higher music education literature. This synthesis centers on three revised definitions and two important concepts. Recalling the previous section, the music industry has been shown to be the external environment for higher music education. The music industry following its digital revolution has also been shown to be turbulent environment, expressing the qualities of turbulence as described by organizational scholars. The critical concepts for this study of higher music education; organizational adaptation, organizational adaptation strategy, and environmental perception; can now be redefined using organizational and higher music education terms. Organizational adaptation in higher music education is *the process by which music programs and institutions work to achieve balance with the music industry* (Aldridge, 1979; Sporn, 1999; Tschmuck, 2017). Organizational adaptation strategy in higher music education is the *integrated decisions, actions, or plans that music units use to achieve balance with the music industry* (Aldridge, 1979; Cameron, 1984; Chaffee, 1985; Sporn, 1999; Tschmuck, 2017; Young, 2018). Finally, environmental perception for higher music education is the *scanning, interpreting, and learning processes that a music program or institution uses to understand the music industry and guide its adaptation strategy* (Alexander, 2020; Aldrich, 1979; Daft & Weick, 1984; Smith & Telang, 2016; Tschmuck, 2017).

Summary

This literature review presented a synthesis of research on organizational adaptation theories, higher education, the music industry, and higher music education programs and institutions, in order to provide the groundwork for this study of higher music education using an organizational adaptation theoretical framework. Nine organizational adaptation theories were reviewed, and from those theories, the critical concepts of turbulent environments, environmental perception, and organizational adaptation strategy were discussed as emergent themes. An organizational strategy typology spectrum was constructed from the governing theories of organizational adaptation containing five categories; decentralization, generalization, inaction, specialization, and formalization. Literature specifically pertaining to organizational adaptation in higher education research was reviewed with notable studies on liberal arts institutions and conservatories holding particular relevance (Gandre, 2001; Hilbun, 2013).

Drawing upon the vast body of music industry scholarship, the digital revolution in the music industry since 1999 was reviewed and contextualized historically. The music industry was then shown to be both the external environment for higher music education, and consistent with the conditions of a turbulent environment. Organizational adaptation strategy in higher music education adaptation was reviewed through eight major domains common to virtually all areas of higher education: curriculum, co-curriculum, faculty, admissions and access, online learning, governance, facilities, and external partnerships. In each case, organizational adaptation strategy can take multiple forms including expansion, contraction, and alteration. Finally, the critical concepts were redefined synthesizing organizational and higher music education scholarship.

Together these three bodies of literature; organizational studies, the music industry, and higher music education; contain an extraordinary amount of scholarship. This scholarship covers

a significant methodological range, from purely qualitative, to mixed methods, to large-scale quantitative techniques. Triangulation of sources through monographs, journals, and organizational reports provided saturation and gave weight to the concepts presented in this review. This study of higher education music programs using an organizational adaptation framework adds unique insight to all of this literature and offers contributions to several areas.

Chapter III

Methods

Higher music education faces a radically turbulent environment primarily due to the digital revolution in the music industry over the past twenty years (Aldrich, 1979; Krueger, 2019; Tschmuck, 2017). The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry. Organizational adaptation theories, primarily those with wide representation in previous research (Aldrich, 1979; Khandwalla, 1977) and applicability to higher education (Baldridge, 1988; Sporn, 1999), provided the theoretical framework to guide this study. The critical concepts of organizational adaptation strategy and environmental perception have been derived from the nine organizational adaptation theories described in Chapter 2. The research questions in this study were:

1. What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?
2. How effectively do music programs perceive their environment?
3. What is the relationship between organizational adaptation strategy and environmental perception?
4. How do music programs' organizational adaptation strategies and environmental perception vary by institutional and leader characteristics?

This chapter will discuss the research design, sample, how each variable was operationalized and measured, the data collection, and data analysis.

Research Design

This study took the form of a cross-sectional survey; It occurred at one point in time and aimed to gather data about the specific population of music units through their music leaders (Lavrakas, 2008). Rea and Parker (2005) highlight the advantage of survey research in order to collect information that is "descriptive, behavioral, and attitudinal" (p. 6). Furthermore, they argue that surveys "generate standardized data that are extremely amenable to quantification and consequent computerization and statistical analysis" (Rea & Parker, 2005, p. 7). Ample precedent in organizational research exists where the primary techniques have been deliberate cross-sectional or longitudinal surveys (Khandwall, 1977; Judge & Douglass, 2009). Cross-sectional survey techniques have also been used by previous researchers in higher music education such as Sorensen's (2007) study of music department chairs. Higher education as a discipline utilizes extensive surveys on a plethora of topics for both formal research and informal assessment (Bok, 2013; Hendrickson et al., 2013).

Sample

The population surveyed was composed of music leaders from institutions participating in the Higher Education Arts Data Services (HEADS) annual survey of music programs. Most of these music units are accredited by the National Association of Schools of Music. Specifically, the study focused on those institutions that grant either baccalaureate, masters, or doctoral degrees in music. Importantly, NASM accredits institutions, not programs (NASM, 2020), meaning many embedded music schools or departments were listed by their parent institution in the HEADS reports. Music leaders provide annual data to NASM and HEADS about their programs therefore, music leaders are generally the listed contact for each institution or program (NASM, 2020). Music leaders can occupy a variety of titles owing to the existence of free-

standing music institutions, and music schools and departments embedded into colleges and universities (NASM, 2020; Sorensen, 2007). These titles can include president, director, provost, dean, and department chair/head.

The influence of institutional presidents and provosts is well-documented in higher education (Bok, 2013; Bowen, 2011). Similar to organizational studies in the for-profit sector, organizational leaders are expected to be the most knowledgeable about adaptation in their organizations (Donaldson, 1996; Khandwalla, 1977; Pfeffer, 1981). In the case of embedded programs such as departments or schools, the department chair or head was most often the music leader that received the survey. Sorensen (2007) and Niezen (2014) both studied music department chairs and their research attests to the department chairs' capacity for influencing adaptation. Hendrickson et al. (2013) support this conclusion in the wider higher education context: "the department chair plays a pivotal role as a change agent" (p. 296). Therefore, despite positional differences, music leaders were expected to be the primary drivers of music program adaptation and thus were the appropriate population for this survey.

Because no database of music leader emails was available from NASM, I constructed the music leader contact list. The HEADS reports listed only names of institutions and the NASM website listed accredited programs and the names of music leaders, but not email addresses. Based upon these two sources I was able to compile the final list of institutions to which I added several institutions that were notably absent due to their lack of specialized accreditation or lack of participation in the HEADS surveys. I then visited the 570 websites corresponding to each music unit and created a database of the email addresses listed for each music leader. All contact information obtained for the database was publicly available to any visitor to a given program's website. The survey was sent to my final database of 570 music leader email addresses. From the

original 570 emails sent, 27 bounced back and 543 surveys were successfully delivered. An initial invitation to participate was sent containing a link to the survey, followed by three reminder emails exactly one week apart (these emails are presented in *Appendix V*). Following four weeks of data collection, 100 valid responses were obtained for a response rate of 18.4%.

Survey Instrument

I designed a survey instrument in order to quantify, measure, and assess organizational adaptation. This instrument is called the "Higher Music Education Organizational Adaptation Survey" and it is included in *Appendix IV*. The instrument contains a total of 57 items, each corresponding to one of three question types: organizational adaptation strategy, environmental perception, and institutional and leader characteristics. The operationalization and measurement of organizational adaptation strategy is described below and contains 40 dichotomous items across 10 domains covering the five previously discussed organizational adaptation strategies. Four items are included in each domain. The environmental perception section consists of 10 items. Institutional and leader characteristic questions comprise a seven-item section at the end of the survey.

Variables

Organizational Adaptation Strategy

Establishing a chronological reference point is critical to the effectiveness of a cross-sectional survey (Rea & Parker, 2005). In an organizational adaptation survey of corporations by the Danish Research Institute for Industrial Dynamics survey (Lundvall & Kristensen, 1997) respondents were asked to indicate "yes" or "no" choices to descriptive events occurring within the last three years. Lundvall and Kristensen (1997) admit the limitations of their timeframe but acknowledge the necessity of choosing a logical timeframe for the survey participants. A time

frame of five years was selected for this study to approximate the tenure of music leaders and the rapid evolution of the digital music economy (Bok, 2013; Tschmuck, 2017).

I wrote the organizational adaptation strategy items informed by the literature review. In selecting items to include for measurement scales, Crocker and Algina (1986) suggest that researchers may create items based upon prior research where concepts or behaviors "that have been most frequently studied by others are used to define the construct of interest" (p. 68). Therefore, each item corresponded to one of ten domains well-documented in the bodies of literature on organizational studies, higher education, and higher music education adaptations as previously described in the literature review. These domains were:

1) *Curriculum* (Bennett, 2007, 2016; Bartlett & Tolmie, 2018; CMS, 2014; Creech et al., 2008; Davidson & Lupton, 2016; Dyndal et al., 2017; Kardos, 2018; Kertz-Welzel, 2018; Miller et al., 2017; Myers, 2016; NASM, 2005; Sarath et al., 2016; Young, 2018)
2) *Co-Curriculum* (Butler, 2007; Hevel, 2016; Kelman, 2015; Kelman & Cashman, 2019; Long, 2012)
3) *Full-Time Faculty* (Bok, 2013; Hendrickson et al., 2013; Kohlenberg, 1989; Miller, 1993; Parkes, 2015)
4) *Part-Time Faculty* (Al-Gharbi, 2020; Bok, 2013; Hendrickson et al., 2013; Kohlenberg, 1989; Miller, 1993; Parkes, 2015; Stanley, 2016)
5) *Admissions Policies* (Kajikawa, 2019; Kardos, 2018; Kertz-Welzel, 2018; Koza, 2008; NASM, 2005, 2014; Norgård, 2018; Palmer, 2011; Snell & Söderman 2014; Tschmuck, 2017)
6) *Leadership* (Bastedo, 2012; Child, 1972; Gmelch & Miskin, 2004; Hendrickson, et al., 2013; Pfeffer, 1988; Khandwalla, 1977; Niezen, 2014; Sorensen, 2007; Sporn, 1999)

7) *Online Curriculum* (Born & Devine, 2015; CMS, 2014; NASM 2020; Myers, 2016; Spilker, 2012; Waldron, 2013)
8) *Governance Changes* (Bastedo, 2012; Bok, 2013; Bowen, 2011; Cameron, 1984; Christensen, & Eyering, 2011; Sporn, 1999)
9) *Facilities* (Alexandar, 2020; Born & Devine, 2015; Christensen & Eyering, 2011; Ruben, et al., 2017).
10) *External Partnerships* (Alexander, 2020; Boehm, 2017; Burton, 2011; Christensen & Eyering, 2011; Kelman & Cashman, 2019; NASM, 2005, 2007; Tschmuck, 2017; Ruben et al., 2017)

Organizational adaptation strategy (OAS) for higher music education was measured by applying a coding system to the organizational adaptation strategy typology described in chapter 2. Respondents were presented with a series of statements in each domain that corresponded to different organizational adaptation strategies. The participants were asked to answer each statement by indicating "yes" or "no". "Yes" answers corresponding with decentralization were coded 2. "Yes" answers corresponding to generalization strategies were coded 1. Specialization strategies with "yes" answers were coded -1, and strategies of formalization with "yes" answers were coded -2. All "no" answers were coded "0" and were considered answers corresponding to the strategy of inaction. This rating scheme expressed the complexity of organizational adaptation strategy (Sporn, 1999) by allowing respondents to select multiple responses to items in each domain across the typology spectrum.

The organizational adaptation strategies are summarized below as operational definitions:

1) Strategies favoring decentralization: An organization splits its structure into a greater number of autonomous or semi-autonomous units (Khandwall, 1977; Lawrence & Lorsch 1967).
2) Strategies favoring generalization: An organization diversifies its activities without substantial alteration in organizational structure (Khandwall, 1977; Sporn, 1999).
3) Strategies favoring inaction: An organization makes no changes, either intentionally, unintentionally through lack of decision-making capability (Khandwalla, 1977), or subservient to isomorphic principals (Donaldson, 1996).
4) Strategies favoring specialization: An organization "doubles-down" and invests a greater share of its resources and energy in its current activities in an effort to improve them or eliminates less-effective activities (Bastedo, 2012; Child, 1972; Gumport & Snydman, 2002; Sporn 1999).
5) Strategies favoring formalization: An organization strengthens managerial control over all activities or builds structure around fringe activities in order to exert centralized direction (Cameron & Quinn, 1983; Child, 1972; Birnbaum, 1988; Khandwalla, 1977).

Table 2 summarizes the organizational adaptation strategies on the typology spectrum with their respective coding.

Table 2
The Organizational Adaptation Strategy Typology Coding System

Organizational Adaptation Strategy	Coding
Strategies Favoring Decentralization	2
Strategies Favoring Generalization	1

Table 2 (Cont.)

Organizational Adaptation Strategy	Coding
Strategies Favoring Inaction	0
Strategies Favoring Specialization	-1
Strategies Favoring Formalization	-2

The complete list of items sorted by organizational adaptation strategy and the coding of "yes" and "no" responses is displayed Table 3.

Table 3
Organizational Adaptation Strategy Response Items and Coding

Decentralization	**Yes**	**No**
We have created one or more new programs	2	0
We have hired new full-time faculty as program directors, coordinators, or department heads	2	0
We have hired new part-time faculty as program directors, coordinators, or department heads	2	0
We have differentiated admissions policies based on students' intended program	2	0
Our leadership has focused on creating new divisions, areas, or departments	2	0
We have created new online programs	2	0
We have created new committees or administrative units	2	0
We have created new co-curricular programs, organizations, or activities	2	0
We have built or created new facilities	2	0
We have developed new partnerships with external organizations	2	0
Generalization		
We have created new courses in subjects where we previously had not offered instruction	1	0
We have hired full-time faculty in subject areas where we previously had no specialists	1	0
We have hired part-time faculty in subject areas where we previously had no specialists	1	0
We have altered our audition policies to include greater varieties of musical style	1	0
Our leadership has focused on expanding the curriculum	1	0
We have created new online courses in subjects where we previously had not offered instruction	1	0
We have expanded the functions of existing committees or administrative units	1	0
We have broadened the activities of existing co-curricular programs	1	0

Table 3 (Cont.)

Generalization	Yes	No
We have modified existing facilities in order to accommodate a broader range of activities	1	0
We have expanded the scope of our existing collaborations with external organizations	1	0
Specialization		
We have discontinued elective courses that did not fall within current programs	-1	0
We have eliminated full-time faculty positions with specialties outside of our traditional offerings	-1	0
We have eliminated part-time faculty positions with specialties outside of our traditional offerings	-1	0
We have narrowed our audition requirements to become more selective for one or more current programs	-1	0
Our leadership has focused on reinforcing our existing strengths	-1	0
We have discontinued one or more online programs	-1	0
We have narrowed the duties of committees or administrative offices	-1	0
We have discontinued co-curricular programs	-1	0
We have discontinued the use of older facilities	-1	0
We have discontinued external partnerships or collaborations	-1	0
Formalization		
We have created new courses to better fulfill aspects of our unit's mission	-2	0
We have hired new full-time faculty as required by our mission or strategic plan	-2	0
We have promoted one or more part-time faculty to full-time positions	-2	0
We have created new admissions policies for all programs	-2	0
Our leadership has focused on creating a new strategic plan	-2	0
We have transferred existing programs online	-2	0
We have increased oversight of committees or administrative units	-2	0
We have increased administrative involvement in co-curricular programs	-2	0
We have acquired facilities from external organizations	-2	0
We have increased administrative involvement in external partnerships	-2	0

Environmental Perception

Environmental perception (EP) has been utilized in previous survey-based organizational research in the for-profit and non-profit sectors. A review of the instrument by Khandwalla (1979) used for research on Canadian and American companies and the instrument by Singer et al. (2012) utilized for research in the health care sector revealed 17 unique survey items used to assess environmental perception. In both of these instruments, environmental perception is

measured through a 7-point Likert-type scale for rating the accuracy of a statement, with a rating of 1 corresponding to “least accurate” and a rating of 7 corresponding to “most accurate”. Because items from both Khandwalla’s (1979) and Singer et al.’s (2012) instruments have been extensively tested for validity and reliability, they were selected for inclusion in this survey. To convert these items from their native form into a form usable for higher music education, I altered the language of each item. Of the original 17 items, ten were selected for conversion and inclusion in this survey based upon the item applicability. Seven items were too specific to the for-profit sector to merit adaptation and inclusion on this instrument.

Three of the ten items selected for inclusion in this study came from Singer et al. (2012). Table 4 lists the original survey item as it appeared in Singer et al. (2012) and its corresponding item adapted for this study.

Table 4
Item Conversion from the Learning Organization Survey (Singer, et al., 2012)

Original Item	Item Altered for Higher Music Education
This work group has forums for meeting with and learning from experts from outside the organization	Our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy
This work group has forms for meeting with and learning from experts from other departments or teams or divisions	Our music unit provides opportunities for faculty to learn about the music industry from other music units
This work group has forums for meeting with and learning from customers or clients	Our music unit provides opportunities for faculty to learn about the music industry from current students

Seven additional items were chosen from the large instrument in Khandwalla’s (1977) widely referenced organizational design research. Table 5 lists those original survey items and their adaptations for higher music education.

Table 5
Item Conversion from the Organizational Design Surveys (Khandwalla, 1977)

Original Item	Item Altered for Higher Music Education
Our business unit must frequently change its products and practices to keep up with competitors.	Our music unit must continuously change its curriculum to keep up with our peer music units.
Products/services quickly become obsolete in our industry.	Our music curricula are aligned with the music industry.
Consumer tastes are fairly easy to forecast in our industry.	Student needs are easy to predict in post-secondary music education.
Our markets are rich in profitably opportunities.	Our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments].
Economic development programs offer sufficient support for our business community.	Our advancement or development office assists with seeking philanthropic support for our music unit
Our markets are rich in investment capital.	Our music unit is successful in attracting external philanthropic support.
Our business unit operates in a very rapidly expanding environment through the expansion of old markets and the emergence of new ones.	The music discipline within higher education is rapidly changing.

The EP items asked respondents to rate the accuracy of each item on a 7-point Likert scale with "7" as the most accurate and "1" as the least accurate. The scores on all EP items were summed to create a composite score, although individual item scores were also used in the analysis.

Institutional and Leader Characteristics

Seven significant institutional and music leader characteristics can be derived from the organizational and higher music education literature. From Donaldson's (1996) research on organizations and Sorensen's (2007) and Neizen's (2014) research on music leaders, the background of the music leader can be considered an influence on organizational adaptation strategy. One survey item asked each music leader to respond to the question "What most accurately describes your primary academic or professional background in music?" with the

following selections, generally regarded by NASM and researchers (Sorensen, 2007) as separate foundational experiences: classical performance or composition; jazz or pop performance or composition; music education; music business or law; musicology or music theory; music technology or production. A choice for those with primary backgrounds "outside of music" was also included with a space to provide a custom response. As is common in higher education research and supported by NASM (2020), academic leaders hold many titles, therefore, respondents were also asked to indicate their current position and title from the following choices: department chair/head, program director, dean, chief academic officer, and president. This item also included space for a custom response for titles not represented.

Gandre's (2001) study of music conservatories identified the location of the institution; rural or urban setting; as important to the way each institution handled challenging times. Combined with Siwek's (2018) and Krueger's (2019) music industry data research that emphasized historical music industry centers such as Los Angeles, Nashville, and New York as critical locations for music institutions, the literature suggests that the geographic location of an institution may have an influence upon that organization's adaptation strategy. Institutional location can be assessed within the U.S. by specifying individual states, cities, or regions. The Integrated Postsecondary Education Data System (IPEDS) groups American institutions into eight geographic regions; New England, Mid East, Great Lakes, Plains, Southeast, Southwest, Rocky Mountains, and Far West. Respondents were asked to select their state, with each state coded according to the eight groups used by IPEDS.

The size of an organization figured prominently in organizational research as a significant variable (Lawrence & Lorsch, 1976; Donaldson, 1996), and higher education scholars highlight size, generally in number of students, as a critical institutional characteristic (Bok, 2013;

Breneman, 1994; Hilbun, 2013; Sporn, 1999), therefore, it was expected that the size of a given program would play a role in that program's adaptation strategy. An institutional size survey item asked respondents to indicate the number of students enrolled in their music unit. The size ranges were taken directly from the HEADS reports. Those enrollment size ranges were: 1-50, 51-100, 101- 201, 201-400, 401+. Finally, there are many institutional types in the higher education ecosystem, often divided by mission or public-private status (Bok, 2013; Thelin, 2011). The preponderance of higher education scholarship that differentiates between public and private institutions provided ample support for the inclusion of a survey item asking respondents to indicate the public or private status of their program (Alexandar, 2020; Bastedo et al., 2016; Bok, 2013; Hendrickson et al., 2013). Higher music education also presents the aforementioned unique possibility to distinguish between stand-alone institutions and embedded programs (NASM, 1999, 2020) and therefore, since categorization of institutions is critical to any study of higher education (Alexander, 2020), this distinction was included as a factor in the consideration of organizational adaptation in a turbulent environment. To bifurcate these categories, one survey item asked respondents to specify if their program is free-standing or embedded into a college or university as a department or school (NASM, 2020). A final consideration for categorizing music units was the types of degrees offered (NASM, 2020). Therefore, one survey item asked respondents to indicate each degree their music unit grants; B.M., BA., M.M., M.A., D.M.A., and Ph.D. Respondents were able to select all that apply.

On the survey instrument, the institutional and leader characteristics described above were coded as follows:

1) Institutional Organization Status: Coded as a dichotomous variable, 1 for free-standing institution, 0 for embedded program.

2) Public or Private Status: Coded as a dichotomous variable, 1 for public status, 0 for private status.
3) Program Size: Coded in groups 1-5 corresponding to the size groups used by HEADS: 1-50 (1), 51-100 (2), 101- 201 (3), 201-400 (4), 401+ (5).
4) Degrees Conferred: Coded for multiple responses with 1 point scored for each selection: B.M., B.A., M.M., M.A., D.M.A., Ph.D. This allowed flexibility for precision disaggregation in the analysis.
5) Program Location: Coded in groups 1-8 corresponding to the eight different regions. Respondents will be asked to indicate their state. Each state will be coded 1-8 to correspond to the different geographic groups: New England (1), Mid East (2), Great Lakes (3), Plains (4), Southeast (5), Southwest (6), Rocky Mountains (7), and Far West (8).
6) Music Leader Background: Coded in groups 0-6 corresponding to each category. These categories are: classical performance (1); jazz or pop performance (2); music education (3); music business or law (4); musicology or music theory (5); music technology or production (6). This is a nominal variable, and a selection for "other" is included (0), along with a space to indicate what a respondent's background is if different from the included choices.
7) Current Music Leader Position: Coded in groups 0-5 corresponding to each category: department chair/head (1); program director (2); dean (3); chief academic officer (4); president (5); other (0). A custom response space is provided if respondents select "other".

Data Collection

Qualtrics was used to build the survey instrument and it was delivered electronically to the respondents via email. An initial letter was sent out to the survey sample describing the study, presenting the institutional review board information, and the survey link. There were three subsequent reminders sent out over the span of the following three weeks exactly seven days apart. The total data collection period was approximately four weeks long. All emails are included in *Appendix V***.**

Median completion time for the "The Higher Music Education Organizational Adaptation Survey" approximately seven minutes. Singer et al. (2012) highlighted the "respondent burden [that] may be particularly problematic in health care organizations plagued by survey fatigue" (p. 436) and as higher education is also a heavily surveyed sector, particularly higher education leaders (Cameron & Tschirhart, 1992; Gmelch & Miskin 2004), this completion time was appropriate. Furthermore, although there were 57 items on the survey, 40 were dichotomous, aiding in limiting completion time (Crocker & Algina, 1986).

Methodologists in both quantitative and qualitative research place heavy emphasis on the importance of question sequencing (Patton, 2001; Rea & Parker, 2005). In the context of survey research, Rea and Parker explain the need for a "clear, logical order to a particular series of questions contained within the survey instrument" (p. 39). Because the respondents should begin the survey thinking about the relationship between their work and the music industry, the first group of questions were the ten environmental perception questions. By that point, a framing was achieved for the organizational adaptation strategy items, placing that group second. The questions pertaining to leader and institutional characteristics were placed last as advised by Patton (2001), to allow respondents to complete simple information once the main body of the

survey was complete. This allowed incomplete surveys to still contain some valuable data in the event respondents choose to skip some or all of the final seven questions.

In an effort to ensure clarity, I conducted a small-scale pilot study with a draft of the survey instrument. The pilot population consisted of 13 participants composed of faculty members from music departments with long tenures in their positions and high-ranking academic administrators outside of music. Personal connection and faculty or administrative experience were the guiding factors in selecting pilot study participants. The pilot study included an invitation for comments or suggested questions on each survey item, along with an additional response labeled "this item is unclear" on all EP and OAS items. Eight responses to the pilot study were received after ten days. Through evaluating comments and the selection of "this item is unclear" responses, two EP items were substantially altered, and seven OAS items were lightly altered. All alterations consisted of linguistic changes to increase the clarity of each item across survey respondents. The item wording in Table 4 and Table 5 reflects the changes made following the pilot study. In addition to altering language, three additional terms were defined at the beginning of the survey; "programs", "full-time faculty", and "part-time faculty"; in order to address questions that several pilot study respondents wrote regarding the usage of these terms. Finally, at the suggestion of one respondent, the previously mentioned institutional characteristic survey item on degrees conferred was added. The survey was then administered on a large scale to the selected music leaders (N = 543). The survey in full form is presented in *Appendix IV*.

Validity and Reliability

Validity in this study was heavily dependent upon the face validity of each item on the survey instrument (Croker & Algina, 1983). The items were written to express actions and vocabulary commonly known to administrators and faculty in higher education (Bok, 2013;

Ruben et al., 2017). Since many items contained the term “music unit”, this term was defined in the survey’s introduction. Reliability was assessed using Croker and Algina’s (1983) recommendation of coefficient alpha as an appropriate lower bound for reliability in survey research. This coefficient was evaluated individually for the 40-item OAS scale and the 10-item EP scale.

Data Analysis

The four research questions in this study were addressed through statistical analyses using Statistical Package for Social Sciences (SPSS) software. Prior to addressing the four research questions, an assessment of the sample (n = 100) was performed via frequency analysis to evaluate the respondents’ institutional and music leader characteristics.

Research question 1:

What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?

This question was addressed through descriptive statistical analysis of the OAS items (Rea & Parker, 2005). Frequency tables displayed the number of institutions responding “yes” and “no” to each OAS item, providing a portrait of the kinds of adaptations that programs are engaging in to respond to music industry change in each domain. Using the coding system displayed in Table 2 and Table 3, the total OAS score of each institution was summed to create a composite OAS score that was reflective of that institution’s overall organizational adaptation tendency. The OAS composite scale has a range from -30 to 30 and scores on this scale were analyzed for the entire sample (n = 100). Fixed points of the composite OAS score and their interpretations are represented in Table 6.

Table 6
Preliminary Interpretations of Composite OAS Score.

OAS Composite Score	Organizational Adaptation Strategy Interpretation
30	Extreme decentralization with extreme generalization
20	Exclusive decentralization
10	Exclusive generalization
0	Extreme inaction
-10	Exclusive specialization
-20	Exclusive formalization
-30	Extreme formalization with extreme specialization

The absolute value of each of the institution's responses using the coding in Table 3 was summed to create the absolute value of the organizational adaptation strategy score, |OAS|. This score, with a range of 0-60, reflects an institution's efforts at overall change weighting more extreme strategies of decentralization and formalization (Cameron, 1984) more heavily than generalization and specialization. Both OAS scores that reveal overall tendencies, and |OAS| scores which reveal overall change, provided useful discipline-spanning data when averaged across institutions. Four individual OAS composite scores were also created for decentralization, generalization, specialization, and formalization. These scores awarded a "1" for "yes" answers to any of the items corresponding to that strategy and a "0" for items corresponding to the other three strategies. Each individual OAS composite score had a range of 0-10. An additional composite score for inaction was created by awarding a "1" for each "no" response and a "0" for each "yes" response. The inaction composite score had a range from 0-40 and represented the level of inaction employed by music units. The mean, minimum, maximum, mode, and standard

distributions of each composite score were examined to assess the distribution of institutions' responses across the organizational adaptation strategy typology spectrum and individual strategies (Crocker & Algina, 1986).

Research question 2:

How effectively do music programs perceive their environment?

This question was also addressed using descriptive statistics. Responses to each question were scored from 1 to 7 corresponding to the 7-point Likert response choices. A composite score was created by summing each respondent's answers into a total score ranging from 10-70. This composite EP score represented a quantification of each music unit's effectiveness in perceiving its music industry environment and was examined for the entire sample (n = 100). All EP items were individually evaluated for range, mean, and standard deviation. Responses to the EP items were additionally examined for inter-item correlations. Significant correlations held more granular implications about the nature of environmental perception in higher music education.

Research question 3:

What is the relationship between organizational adaptation strategy and environmental perception?

This question was addressed through multiple steps and it included four hypotheses. Initially, all eight composite scores; EP, OAS, |OAS|, decentralization, generalization, specialization, formalization and inaction; were assessed for correlations across the entire sample. The significance of the Person product-moment correlation highlighted potential relationships between each pair of composite scores (Cohen et al., 2003). The correlation between OAS and EP, $r_{OAS.EP,}$, was interpreted as the trend in organizational adaptation strategy by environmental perception effectiveness. The relationship between EP and the absolute value

of OAS, $r_{|OAS|.EP}$, was interpreted as the total tendency of music units to take any type of adaptive action based upon their ability to perceive the music industry environment. These two correlations provided a background for assessing the following four hypotheses based upon existing research:

1) Hypotheses 1: *As Environmental Perception increases, programs will trend toward decentralization*. This hypothesis is supported by higher education researchers (Bok, 2013; Gumport & Snydman, 2002; Sporn, 1999; Thelin, 2011), and often advocated for by higher music education scholars (CMS, 2014; Myers, 2016; Snell & Söderman, 2014). For this hypothesis, items were recoded to reflect 1 for a decentralization choice and 0 for all other choices. This coding was done for each of the other OAS types to facilitate correlations between EP and individual OAS strategies producing a composite score for decentralization (D), generalization (G), specialization (S) and formalization (F). The correlation between EP and the total of all decentralization items, $r_{EP.D}$ represented the trend of music units' behavior toward organizational adaptation strategies of decentralization when EP increases.
2) Hypotheses 2: *As Environmental Perception increases, programs will trend toward formalization.* Similar to hypothesis one, this prediction is well-supported by higher education research (Brenemen, 1994; Bueller, 2015; Christensen, & Eyering 2011), and higher music education scholars (Gandre, 2011; NASM, 2005; Stanley, 2016). It was similarly assessed in the same manner as hypothesis one, where the point-biserial correlation of interest was the correlation between EP and items corresponding to formalization. The formalization composite score was evaluated for a correlation with

EP, giving $r_{EP.F}$: the tendency of music units to employ organizational adaptation strategies of formalization when EP increases.

3) Hypothesis 3: *As Environmental Perception increases, programs will trend toward decentralization in some areas and formalization in other areas*. This hypothesis, Cameron's (1984) "Janusian' Institution" (p. 137), states that "both loose coupling and tight coupling will be required" (Cameron, 1984, p. 137) for higher education organizations in turbulent environments. This hypothesis was tested through a two-step process. First, phi-coefficients between all items in the decentralization set and all items in the formalization were evaluated for each respondent, representing a correlation coefficient between decentralization and formalization for each institution, the $r_{d.f.}$ This new variable was evaluated for normality using a histogram. Second, EP scores for each institution (x) were examined on a scatter plot against this correlation (y). The correlation between $r_{d.f}$ and EP scores was considered to be the *Janusian coefficient, r_J*: the magnitude and direction of the relationship between an organizations set's environmental perception and its tendency to employ both decentralization and formalization adaptation strategies. The Janusian coefficient operationalized Cameron's (1984) theory; music programs with greater environmental perception will display stronger correlations between elements of a decentralization organizational adaptation strategy and elements of a formalization organizational adaptation strategy. The Janusian coefficient was evaluated for the whole sample.

4) Hypothesis 4: *There is no relationship between Environmental Perception and Organizational Adaptation Strategy.* This would correspond to a cybernetic strategy of engaging in very little program change, regardless of environmental awareness (Ashby,

1956; Birnbaum, 1988). It could additionally point toward a haphazard isomorphism defined by decision paralysis (Bueller, 2015; Donaldson, 1996). Inaction was deduced as an overall strategy using two complimentary methods. First, the OAS responses were recoded as dichotomous items where all "no" answers produced a 1 and all other "yes" answers to OAS questions produced a 0 creating a total inaction score (I). The correlation between this variable and EP, $r_{EP.I}$, indicates the relationship between EP and an OAS strategy of inaction. Furthermore, inaction was assessed via the $r_{OAS.EP}$ and $r_{|OAS|.EP}$ are relationships.

One final analysis method in assessing research question three was the review of the correlations between the composite EP score and all individual OAS item scores, as well as OAS composite scores and individual EP items. Inter-item correlations for the entire instrument were also evaluated for any notable relationships between individual OAS items and individual EP items.

Research question 4:

How do music programs' organizational adaptation strategies and environmental perception vary by leader and institutional characteristics?

This question was addressed by repeating elements of the analyses described above for the previous hypotheses and disaggregating by institutional type, music leader background, degrees conferred, music leader current position and program size. Disaggregating by location and free/embedded status was not possible due to small group sizes. Because of uneven group sizes in the results for degrees conferred, music leader background, music leader current position, and music unit size, the data was recoded to create larger groups for comparisons. For degrees conferred, music units were grouped into three subgroups: music units granting only

baccalaureate degrees coded 1, music units where the highest degree conferred was the master's degree coded 2, and doctoral-granting music units, coded 3. Music leader backgrounds were grouped as "Classical Performance or Composition", coded 1, "Music Education", coded 2, and "All Other Backgrounds", coded 3. Music leaders' current positions were recoded to reflect the prevalence of department chairs with "Department Chair" coded 1 and "All Other Current Positions" coded 2. Finally, music unit sizes were grouped into two categories; under 200 coded 1 and over 200 coded 2.

Utilizing these revised groupings, averages of OAS, |OAS|, and EP scores along with the means for each OAS composite score were assessed. Six correlations were also evaluated. The correlations between EP and OAS, |OAS|, and the four individual OAS strategy composite scores were examined with attention to pronounced differences between groups.

Summary

This chapter described the methodology for this study of organizational adaptation in higher music education. A cross-sectional survey design was used with a survey instrument I created containing original and adapted items. The survey contained 57 items across three categories: Organizational adaptation strategy, environmental perception, and institutional and leader characteristics. Music leaders from predominantly NASM accredited institutions that grant at least four-year degrees were the target survey population (N= 543), and their contact information was compiled from public websites and HEADS reports. Following four weeks of data collection 100 responses were received for a response rate of 18.4%.

Each of the three survey item categories was measured using common methods from social science research (Cohen et al., 2003; Crocker & Algina, 1986). Organizational adaptation strategy was operationalized and measured through the use of the organizational adaptation

strategy typology spectrum described in the literature review. Environmental perception was measured through a Likert-type scale based on altering items from existing instruments used to measure environmental perception in other sectors (Khandwalla, 1977; Singer et al., 2012). Institutional characteristics were converted into categorical variables for use in the descriptive analysis as a mechanism to sort groups of music units. The survey was administered electronically to the target respondents.

Data analysis for this study was primarily conducted using descriptive statistical techniques to address the first three research questions. Categorical variables reflecting institutional characteristics were used to address research question four. Four hypotheses were offered for the effect of environmental perception on organizational adaptation strategy corresponding to heavily supported prior research in higher education and higher music education, along with the analyses employed to test each hypothesis.

Chapter IV

Results

Overview of the Methods

The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry. The study utilized a cross-sectional survey (Lavrakas, 2008) called the "Higher Music Education Organizational Adaptation Survey" to capture the current state of higher music education. I designed the survey instrument containing 50 items to measure the organizational concepts of environmental perception and organizational adaptation strategy. Organizational Adaptation Strategy (OAS) items were developed from an extensive review of organizational literature and operationalized through an organizational adaptation typology spectrum. Environmental Perception (EP) items were adapted from previously existing survey instruments used to measure environmental perception in other fields (Khandwalla, 1977; Singer et al. 2012). Finally, seven items were included in the survey to ascertain institutional and music leader characteristics. The sample for this study was the population of music leaders; those holding the highest-ranking academic authority in music departments, music schools, music colleges, and conservatories.

All data analysis was performed using Statistical Package for the Social Sciences (SPSS). There were four research questions in this study and the third question contained four hypotheses. These questions are:

1. What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?
2. How effectively do music programs perceive their environment?

3. What is the relationship between organizational adaptation strategy and environmental perception?
    i. Hypothesis 1: As environmental perception increases, programs will trend toward decentralization.
    ii. Hypothesis 2: As environmental perception increases, programs will trend toward formalization.
    iii. Hypothesis 3: As environmental perception increases, programs will trend toward decentralization in some areas and formalization in other areas.
    iv. Hypothesis 4: There is no relationship between environmental perception and organizational adaptation strategy.
4. How do music programs' organizational adaptation strategies and environmental perception vary by institutional and leader characteristics?

The remainder of this chapter will describe the sample and present each research question and related analysis results.

Sample

As a pre-cursor to the analysis, frequency statistics were analyzed by using the coding schemes for each of the qualitative variables in this study. Those variables were: (1) Public or Private Status; (2) Free-Standing or Embedded Status; (3) Music Unit Size by Enrollment; (4) Region; (5) Degrees Conferred; (6) Music Leader's Primary Background; and (7) Music Leader's Current Role.

The responding music units in this study were skewed toward public institutions with 61.3% indicating public status. Although free-standing music units are generally less common than embedded units, many were selected for initial survey delivery. However, among the

respondents, merely 2.1% indicated they were free-standing institutions unaffiliated with larger colleges or universities. Table 7 displays music units' status and organizational type.

Table 7
Music Units' Status and Organizational Type

*Music Unit Status**	*Frequency*	*%*
Public	57	61.3
Private	36	38.7
*Organizational Type***	*Frequency*	*%*
Free-Standing	2	2.1
Embedded	92	97.9

*N = 93; **N = 94

Unlike organizational type, music units exhibited a relatively even split by enrollment size. The categories for enrollment size match those utilized by NASM in the HEADS data reports. These enrollment numbers indicate the number of music majors in each program, not the total number of students served by music units (HEADS, 2019). Over a fifth of music units were found to have 50 or fewer students (22.3%) with an identical percentage in the 51-100 range. The 101-201 range represented 21.3% of the respondents, as did the 201-400 range. Larger music units were rarer with only 12.8% of participating music units indicating over 400 music majors in their programs. Table 8 displays music unit size by enrollment for the entire sample.

Table 8
Music Unit Enrollment Size

Size Range by Number of Majors	*Frequency*	*%*
1-50	21	22.3
51-100	21	22.3
101-201	20	21.3
201-400	20	21.3
400+	12	12.8

N = 94

The geography of higher music education in this study was assessed through a question asking respondents to indicate their state. These states were grouped by region using the IPEDS groups, New England, Mid East, Great Lakes, Plains, Southeast, Southwest, Rocky Mountains, and Far West. Nearly one-third of responding music units were located in the Southeast region (32.6%) and the Great Lakes region included approximately one-fifth of respondents (20.7%). The Plains region consisted of 12% of music units with just slightly more representation than the Mid-East region at 10.9%. Southwest music units represented 8.7% of the sample. Music units located in the western United States did not respond to the survey in large numbers as only 5.4% of respondents selected states in the Rocky Mountains region and another 5.4% selected states in the Far West. Table 9 highlights the geographic distribution of responding music units by IPEDS region.

Table 9
Distribution of Music Units' Region

Region	*Frequency*	*%*
New England	4	4.3
Mid-East	10	10.9
Great Lakes	19	20.7
Plains	11	12
Southeast	30	32.6
Southwest	8	8.7
Rocky Mountains	5	5.4
Far West	5	5.4

N = 92

Music units grant a large variety of degrees and credentials (NASM, 2020). In this study, the degrees conferred by responding units were analyzed for specific combinations of degrees and for overall degree level. Within the sample (N = 89), 49.4% of music units conferred only baccalaureate level credentials, the B.A. or the B.M. Over one-third of music units (37.1%) granted masters level credentials as their highest degree, either the M.A. or M.M. Doctoral

granting music units represented only 13.5% of respondents in this study. For a more granular analysis, music units were asked to indicate each credential awarded. This produced several specific combination types. The most common combinations of degrees conferred by responding music units are displayed in Table 10.

Table 10
Common Degree Combinations Awarded by Music Units

Degrees Conferred	*Frequency*	*%*
B.M.	14	14
B.M., B.A.	29	29
B.M., B.A., M.A.	5	5
B.M., B.A., M.M.	17	17
B.M., B.A., M.A., M.M., D.M.A., Ph.D.	4	4
B.M., M.M.	7	7
No Response	11	11
All Other Combinations	13	13

N = 100

The background of music leaders was grouped by primary area of professional experience or academic training. Music leaders participating in this study were exceptionally homogeneous with the vast majority representing classical performance or composition (52.1%) or music education (31.9%). Jazz or pop performance or composition was indicated by only (6.4%) of music leaders as a primary background and training in musicology or music theory represented 4.3%. Merely 2.1% of respondents indicated a primary background in music technology or music production and only one respondent indicated a background in music business or law. Backgrounds outside of music composed 2.1% of the sample, however, one music leader indicated “music therapy” in this category as that choice was not presented. The other respondent indicating “outside of music” wrote “classical composition and jazz studies” in the blank prompt space. The full distribution of primary music leader backgrounds is displayed in Table 11.

Table 11
Music Leaders' Primary Background

Music Leader Primary Background	*Frequency*	*%*
Classical Performance or Composition	49	52.1
Jazz or Pop Performance or Composition	6	6.4
Music Education	30	31.9
Music Business or Law	1	1.1
Musicology or Music Theory	4	4.3
Music Technology or Music Production	2	2.1
Outside of Music	2	2.1

N = 94

The current position of music leaders was similarly disproportionate. Music leaders overwhelmingly responded that they were department chairs or department heads (72.3%). Deans represented 14.9% of the sample and program directors represented 7.4%. Only two respondents were presidents of institutions, and no respondents currently occupied the role of chief academic officer. This survey item included a choice for "other" and three respondents indicated that choice to provide additional information. These responses were one "director", one "NASM Coordinator" and one "coordinator". Responses indicating music leaders' current position are displayed in Table 12.

Table 12
Music Leaders' Current Position

Music Leader Current Position	*Frequency*	*%*
Department Chair/Head	68	72.3
Program Director	7	7.4
Dean	14	14.9
Chief Academic Officer	0	0
President	2	2.1
Other	3	3.2

N = 94

Use of Organizational Adaptation Strategies

Research Question 1:

What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?

First, all 40 OAS items were examined individually using frequency tables to assess the percentages of respondents answering "yes" and "no" to each question. This analysis provides a detailed portrait of organizational adaptation strategy in each domain. The results below, presented in Tables 13A-13J, group each OAS item by the corresponding 10 domains. The dominant strategy in each domain is underlined. Items are individually labeled by their corresponding codes for reference. These codes indicate the specific organizational adaptation strategy for each item: Decentralization (D), Generalization (G), Specialization (S), and Formalization (F). Additionally, items are numerically coded for each domain: Curriculum (1), Full-time Faculty (2), Part-Time Faculty (3), Admissions Policies (4), Leadership (5), Online Curriculum (6), Governance (7), Co-Curriculum (8), Facilities (9), and External Partnerships (10). For example, a code of *G3* would indicate action in the part-time faculty domain corresponding to an organizational adaptation strategy of generalization.

Formalization is the dominant strategy in the domain of curriculum items with 88.7% of respondents answering "yes". However, generalization also represented a high percentage of "yes" answers (85.6%). All organizational adaptation strategies in the curriculum domain had high percentages of "yes" responses (> 66%). Music units display a wide range of organizational adaptation strategies pertaining to curriculum, yet relative to these high percentages, specialization through the discontinuation of elective courses outside of current programs

represented the lowest percentage of "yes" responses (68%). Domain results for curriculum are displayed in Table 13A.

Table 13A
Domain: Curriculum

Item	Strategy	*N*	Yes (%)	No (%)
D1. We have created one or more new programs	Decentralization	97	74.2	25.8
G1. We have created new courses in subjects where we previously had not offered instruction	Generalization	97	85.6	14.4
S1. We have discontinued elective courses that did not fall within current programs	Specialization	97	68	32
F1. We have created new courses to better fulfill aspects of our unit's mission	Formalization	97	88.7	11.3

In the domain of full-time faculty, formalization was the dominant strategy with 63.9% of "yes" responses compared to decentralization (50.5%), generalization (45.8%), and specialization (15.5%). Responses in this domain were relatively dispersed; A 48.4% difference separated specialization responses from formalization responses. Domain results for full-time faculty are displayed in Table 13B.

Table 13B
Domain: Full-Time Faculty

Item	Strategy	*N*	Yes (%)	No (%)
D2. We have hired new full-time faculty as program directors, coordinators, or department heads	Decentralization	97	50.5	49.5
G2. We have hired full-time faculty in subject areas where we previously had no specialists	Generalization	96	45.8	54.2
S2. We have eliminated full-time faculty positions with specialties outside of our traditional offerings	Specialization	97	15.5	84.5
F2. We have hired new full-time faculty as required by our mission or strategic plan	Formalization	97	63.9	36.1

The part-time faculty domain results indicated a strong preference among respondents for a strategy of generalization with 65.6% answering "yes" to hiring part-time faculty in previously unrepresented subject areas. Approximately a quarter of respondents indicated "yes" for items corresponding to decentralization (24%) and specialization (27.1%). Similar to the full-time faculty domain, music units overall indicate high percentages of "no" answers to items describing the elimination of part-time faculty (72.9%). The item corresponding to a formalization strategy returned 40.6% "yes" answers. Although full-time faculty hiring is most consistently aligned with formalization, part-time faculty hiring trends toward generalization. Domain results for part-time faculty are displayed in Table 13C.

Table 13C
Domain: Part-Time Faculty

Item	Strategy	*N*	Yes (%)	No (%)
D3. We have hired new part-time faculty as program directors, coordinators, or department heads	Decentralization	96	24	76
G3. We have hired part-time faculty in subject areas where we previously had no specialists	Generalization	96	65.6	34.4
S3. We have eliminated part-time faculty positions with specialties outside of our traditional offerings	Specialization	96	27.1	72.9
F3. We have promoted one or more part-time faculty to full-time positions	Formalization	96	40.6	59.4

An organizational adaptation strategy of generalization was also dominant in the domain of admissions policies. Nearly two thirds of music units indicated "yes" to adopting more musically inclusive audition policies (65.6%). Contrastingly, only 10.4% of music units indicated they had narrowed their audition requirements to become more selective, a strategy of specialization. Nearly half of music units had adopted a decentralization strategy (49%) of differentiating policies by program, and slightly less than one quarter of responding music units

engaged in a reimagining of admissions policies for all programs (22.9%), a formalization strategy. Domain results for admissions policies are displayed in Table 13D.

Table 13D
Domain: Admissions Policies

Item	Strategy	*N*	Yes (%)	No (%)
D4. We have differentiated admissions policies based on students' intended program	Decentralization	96	49	51
G4. We have altered our audition policies to include greater varieties of musical style	Generalization	96	65.6	35.4
S4. We have narrowed our audition requirements to become more selective for one or more current programs	Specialization	96	10.4	89.6
F4. We have created new admissions policies for all programs	Formalization	96	22.9	77.1

The leadership domain is unique in that a very high percentage of music units favored a strategy of specialization (83%) over the other strategies. However, more than two thirds of music units also indicated the adoption of strategies of generalization (67%) and formalization (69.9%). The decentralization item received "yes" responses from 36.2% of respondents. Clearly music units overall are engaging in adaptive action within the domain of leadership, as indicated by the relatively low "no" response rate to the majority of these items. Domain results for leadership are displayed in Table 13E.

Table 13E
Domain: Leadership

Item	Strategy	*N*	Yes (%)	No (%)
D5. Our leadership has focused on creating new divisions, areas, or departments	Decentralization	94	36.2	63.8
G5. Our leadership has focused on expanding the curriculum	Generalization	94	67	33

Table 13E (Cont.)

Item	Strategy	*N*	Yes (%)	No (%)
S5. Our leadership has focused on reinforcing our existing strengths	Specialization	94	83	17
F5. Our leadership has focused on creating a new strategic plan	Formalization	93	69.9	30.1

A clear preference for a generalization strategy was displayed in the domain of online curriculum with 57.4% of music units indicating they had created new online elective courses in subject areas where previously no instruction had been offered. The creation of new online programs, corresponding to a strategy of decentralization received 37.2% of "yes" responses and 29% of music units indicated they had transferred existing programs online, a strategy of formalization. Interestingly, very few music units indicated they had employed a specialization strategy of discontinuing one or more online programs (3.2%). Items in the online curriculum domain also displayed high percentages of "no" responses to each strategy; decentralization (62.8% "no"), generalization (42.6% "no"), specialization (96.8% "no"), formalization (71% "no"); indicating that music units are engaging in comparatively less adaptive action through their online curricula. Domain results for online curriculum are displayed in Table 13F.

Table 13F
Domain: Online Curriculum

Item	Strategy	*N*	Yes (%)	No (%)
D6. We have created new online programs	Decentralization	94	37.2	62.8
G6. We have created new online courses in subjects where we previously had not offered instruction	Generalization	94	57.4	42.6
S6. We have discontinued one or more online programs	Specialization	94	3.2	96.8
F6. We have transferred existing programs online	Formalization	93	29	71

An organizational adaptation strategy of generalization was found to be dominant in the governance domain with 63.8% of respondents answering "yes" to the expansion of existing committee or administrative units' functions. Decentralization also received a high percentage of "yes" responses (61.7%) and approximately one third of music units (39.4%) indicated they had increased oversight of committees or administrative units, a formalization strategy. Music units indicated a reluctance to specialize in the governance domain as only 17% of respondents answered "yes" to narrowing the duties of committees and administrative units. All results for the governance domain are shown in Table 13G.

Table 13G
Domain: Governance

Item	Strategy	*N*	Yes (%)	No (%)
D7. We have created new committees or administrative units	Decentralization	93	61.7	38.3
G7. We have expanded the functions of existing committees or administrative units	Generalization	93	63.8	36.2
S7. We have narrowed the duties of committees or administrative offices	Specialization	93	17	83
F7. We have increased oversight of committees or administrative units	Formalization	93	39.4	60.6

Music units were more evenly split in the co-curriculum domain, slightly favoring a decentralization strategy (53.2% "yes responses") over a generalization strategy (50% "yes" responses). Few music units indicated they had discontinued co-curricular programs (12.8%) and approximately a quarter expressed a formalization strategy of increased administrative involvement (24.5%). The results also suggest more broadly, that about half of music units are adding or expanding co-curricular programing. Domain results for co-curriculum are displayed in Table 13H.

Table 13H
Domain: Co-Curriculum

Item	Strategy	*N*	Yes (%)	No (%)
D8. We have created new co-curricular programs, organizations, or activities	Decentralization	93	53.2	46.8
G8. We have broadened the activities of existing co-curricular programs	Generalization	93	50	50
S8. We have discontinued co-curricular programs	Specialization	93	12.8	87.2
F8. We have increased administrative involvement in co-curricular programs	Formalization	93	24.5	75.5

Unique within the individual domain results is the facilities domain. The modification of existing facilities, a generalization strategy, was selected by 52.1% of respondents. Decentralization in the form of creating new facilities was engaged in by only 24.5% of responding music units. The discontinuation of older facilities, specialization, and the acquisition of facilities externally, formalization, both were utilized by less than ten percent of music units; 9.6% and 8.5% respectively. In this domain, the organizational adaptation strategy of generalization was heavily preferred. Results from the facilities domain are displayed in Table 13I.

Table 13I
Domain: Facilities

Item	Strategy	*N*	Yes (%)	No (%)
D9. We have built or created new facilities	Decentralization	93	24.5	75.5
G9. We have modified existing facilities in order to accommodate a broader range of activities	Generalization	93	52.1	47.9
S9. We have discontinued the use of older facilities	Specialization	93	9.6	90.4
F9. We have acquired facilities from external organizations	Formalization	93	8.5	91.5

Generalization was slightly favored in the external partnership domain, receiving 57.4% "yes" responses. Developing new partnerships, a strategy of decentralization, was also utilized by over half of music units (55.3%). Music units demonstrated reluctance to discontinue partnerships, a specialization strategy, with only 12.8% of respondents indicating "yes" on this item. Interestingly, 40.4% of units indicated increasing administrative involvement in external partnerships, a strategy of formalization. This domain bears similarities to co-curriculum, highlighting a potential relationship between these domains. Results from the domain of external partnerships are displayed in Table 13J.

Table 13J
Domain: External Partnerships

Item	Strategy	*N*	Yes (%)	No (%)
D10. We have developed new partnerships with external organizations	Decentralization	93	55.3	44.7
G10. We have expanded the scope of our existing collaborations with external organizations	Generalization	93	57.4	42.6
S10. We have discontinued external partnerships or collaborations	Specialization	93	12.8	87.2
F10. We have increased administrative involvement in external partnerships	Formalization	93	40.4	59.6

Overall, descriptive results from the OAS items paint a portrait of the organizational adaptation strategies utilized by music units. In six of the ten domains, items corresponding to generalization received the greatest percentage of "yes" answers: part-time faculty, admissions policies, online curriculum, governance, facilities, and external partnerships. This implies a collective trend toward organizational adaptation strategies of generalization in the field. This trend is most pronounced in the domains of part-time faculty and facilities. Generalization is moderately favored (~20% higher "yes" rate than the next highest strategy) in the domains of external partnerships and online curriculum and slightly favored (~2%) in the governance

domain. Both curriculum and co-curriculum domains had close differences (< 2.5%) between the dominant strategy and generalization, further indicating the overall disciplinary trend toward a generalization strategy. Formalization was the dominant strategy in the domains of curriculum and full-time faculty. Leadership items heavily favored specialization and co-curriculum was the only domain in which the greatest percentage of respondents indicated a strategy of decentralization.

Differences among the percentages between domains are illustrative of the efforts at adaptation by music units in each domain. The curriculum domain results showcase high percentages of "yes" answers in each strategy, (decentralization, 74.2%; generalization, 85.6%; specialization, 68%; formalization, 88.7%) demonstrating the attention that music units are investing curriculum adaptation in some form. By contrast, the widely spread results for the facilities domain (decentralization, 24.5%; generalization, 52.1%; specialization, 9.6%; formalization, 8.5%) are indicative of music units relying heavily on generalization with comparatively little investment in the other organizational adaptation strategies.

The second component of research question one was an evaluation of total organizational adaptation for the entire sample. This was addressed through an examination of descriptive statistics corresponding to the organizational adaptation strategy composite scores. First, the 40 items on OAS scale were evaluated for reliability (α = .833). As Croker and Algina (1986) recommend values > .7 for reliable scales, the OAS scale is in an acceptable range. OAS scores were then evaluated for the entire sample (n = 97) on a histogram to confirm a normal distribution. Following this assessment, the composite scores for each organizational adaptation strategy; decentralization, generalization, specialization, formalization, were also assessed for normality via histograms. Through prior coding in Qualtrics, these composites were already

present in the data set. In each case, all items were converted to dichotomous variables awarding a "1" for "yes" and a "0" for "no". The inaction composite score was constructed by coding "0" for all yes answers and "1" for all "no" answers to each of the 40 items, resulting in a larger range. This composite was also assessed for normality using a histogram. A final score, the |OAS| was also assessed for normality via histograms. For this recoding, items corresponding to strategies of specialization and formalization were coded "1" and "2" respectively, with all "no" answers similarly coded "0".

To gain a macro-understanding of the organizational adaptation strategy trends, descriptive statistics for the OAS, the organizational adaptation strategy composite, |OAS|, the total adaptive action composite, and individual organizational adaptation strategy composites are presented in Table 14.

Table 14
Descriptive Statistics for Organizational Adaptation Strategy Variables

Scale	*N*	*Min*	*Max*	*Mode*	μ	σ
Total OAS	97	-7	17	3	4.14	5.29
Absolute OAS	97	3	55	32	26.06	10.04
Decentralization Composite	97	0	10	4	4.57	2.27
Generalization Composite	97	1	10	6	5.97	2.37
Specialization Composite	97	0	7	2	2.55	1.41
Formalization Composite	97	0	9	5	4.21	2.03
Inaction Composite	97	1	38	23[a]	21.86	7

[a] Multiple modes exist; 23 and 28.

Importantly, organizational adaptation strategies are not exclusive constructs, therefore these composite scores provide insight on the mixture of organizational adaptation strategies employed by music units. Examining the OAS score reveals a mean of 4.14, indicating an overall field-wide trend toward strategies of generalization. The relatively high mean of generalization (5.97) compared to decentralization (4.57) and formalization (4.21) additionally indicate this large-scale trend. Specialization has the lowest mean (2.55), an indication that music leaders

answered “yes” to fewer specialization items than any of the other strategies. The inaction composite was found to have a mean of 21.86 and a range nearly spanning all possible scores (0-40). The |OAS| score mean (26.06), also near the center of the range (0-60) but slightly skewed toward less total adaptive action and greater numbers of lower scoring items, generalization and specialization. This also points to a second broad trend of music units answering “yes” to only about half of the adaptive actions presented in the OAS portion of the survey.

Previously, Table 6 in Chapter 3 illustrated important nodes on the OAS typology spectrum. Following the descriptive assessment, OAS scores were evaluated using frequency plots to display how music units were arrayed on the organizational adaptation strategy typology spectrum as indicated by their OAS scores. In addition to the nodes for fixed and extreme OAS scores, Table 15 presents OAS scores across the entire range of organizational strategies along with the percentage of music units trending toward each strategy.

Table 15
Distribution of OAS Scores on the Organizational Adaptation Typology Spectrum

Organizational Adaptation Strategy	OAS Composite Score Range	Scores (%)
Extreme Decentralization with Extreme Generalization	30	0
Exclusive Decentralization	20	0
Trending Toward Decentralization	11 - 19	10.3
Exclusive Generalization	10	2.1
Strategies Trending Toward Generalization	1 - 9	62.8
Extreme Inaction	0	8.2
Strategies Trending Toward Specialization	-9 - 0	16.5
Exclusive Specialization	-10	0
Strategies Trending Toward Formalization	-20 - -11	0
Exclusive Formalization	-20	0
Extreme Formalization with Extreme Specialization	-30	0

N = 97

The high percentage of OAS scores falling within the trend toward generalization (62.8%) further indicates that on the field-wide level, music units are choosing adaptive actions that compose an organizational adaptation strategy consistent with generalization. Of notable interest in these results is the total lack of scores on the extreme ends of the typology spectrum. The fixed point of inaction represented 8.2% of OAS scores, however, strategies of inaction must be partitioned from isomorphism by deeper evaluation in the forthcoming sections for research question three. OAS scores mapped relatively close to a normal distribution and the entire distribution is displayed in the histogram in Figure 3.

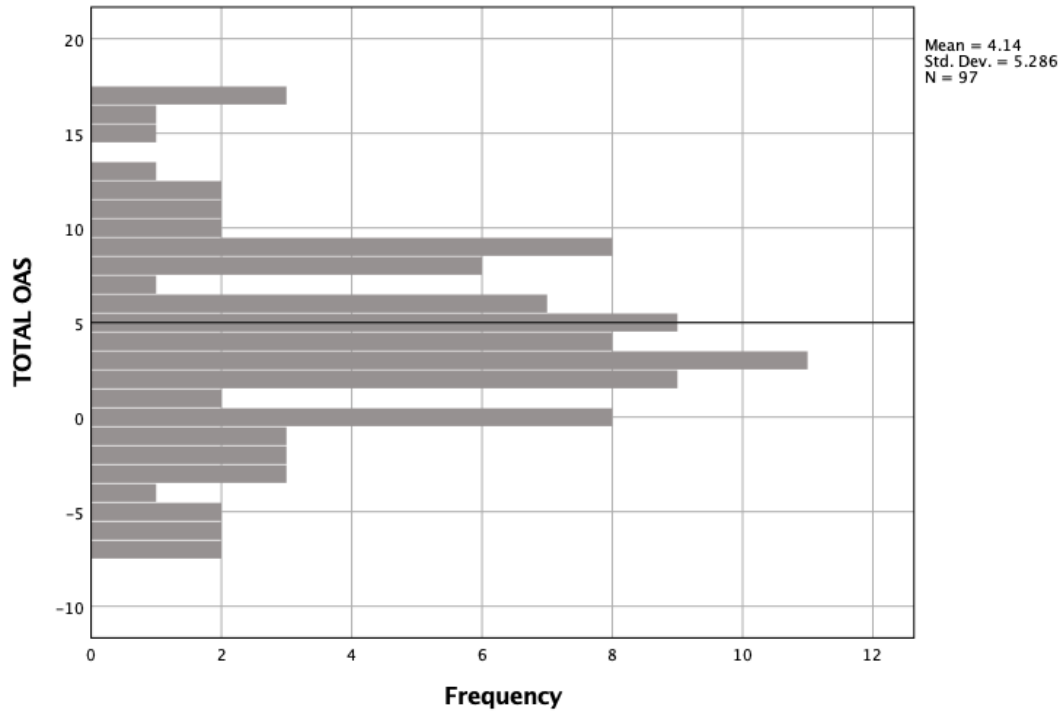

Figure 3
Distribution of Organizational Adaptation Strategy Scores

This figure supports the results of the individual item analysis and further locates the majority of OAS scores within the range for strategies trending toward generalization. When the individual domain results are considered in the context of the composite OAS and |OAS| scores,

a cogent conclusion can be presented: Music units are moderately engaged in adaptive action to their turbulent environment and there is an aggregate trend toward the organizational adaptation strategy of generalization.

Environmental Perception

Research Question 2:

How effectively do music programs perceive their environment?

This question was also addressed through an examination of descriptive statistics corresponding to the Environmental Perception (EP) items. This scale, with a theoretical range of 10-70, was assessed for normality via a histogram and the scores were found to correspond to a normal distribution. Lower scores indicate a lower level of environmental perception and higher scores correspond to higher levels of environmental perception accordingly. Then, the 10 EP items were evaluated for reliability ($\alpha = .791$). Although slightly lower than the OAS reliability coefficient, this is still above Croker and Algina's (1986) recommended cutoff value.

EP scores span nearly the entire range of possible values with a maximum of 62 and a minimum score of 18. The mean (40.91) is slightly higher than the midpoint of the scale suggesting that music units on average have a moderate perception of their music industry environment. This is further confirmed by the standard deviation (10.19) indicating that the majority of EP scores fall between 30.72 and 51.1. By this metric music units can be described as broadly having a modest perception of their music industry environment with fewer schools averaging very high or very low EP scores. The EP items were then examined individually for descriptive statistics in order to more precisely describe environmental perception in higher music education. Descriptive statistics for the EP composite scale are displayed in Table 16.

Table 16
Descriptive Statistics for the Environmental Perception Scale

Scale	*N*	*Min*	*Max*	μ	σ
Environmental Perception	97	18	62	40.91	10.19

Individual EP item statistics are relatively consistent. Respondents' mean scores for nine of the ten items were above the theoretical midpoint (3.5) for each item score. However, among items with higher means some had relatively large standard deviations. The item "our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy" (μ = 4.24) had a standard deviation of 1.93 suggesting a wide split on this item. Similarly, the items corresponding to philanthropic activity such as "our advancement or development office assists with seeking philanthropic support for our music unit" (μ = 4.6, σ = 1.91) and "our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments]" (μ = 4.11, σ = 1.89) display higher means and higher standard deviations. This indicates that although on average music units are moderately successful with philanthropic efforts, there is a wide range in this area. The most standout item on the EP scale was: "the music discipline within higher education is rapidly changing" (μ = 5.97, σ = 1.17). This item has the highest mean score and lowest standard deviation indicating that music units rated this statement with the highest accuracy levels. Additionally, music units displayed the highest levels of agreement on the rapidly changing nature of the music discipline in higher education. In fact, not one music unit selected "1 Least Accurate" for this item. The mean score for "student needs are easy to predict in post-secondary music education" (3.01) was the only item below the midpoint with a low standard deviation (σ = 1.2) and this item had the lowest

average score suggesting that music units felt it is difficult to predict the needs of their students.

All EP descriptive statistics are displayed in Table 17.

Table 17
Descriptive Statistics for Environmental Perception Items

Item	*N*	*Min*	*Max*	μ	σ
Our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy.	96	1	7	4.24	1.93
Our music unit provides opportunities for faculty to learn about the music industry from other music units.	95	1	7	3.61	1.93
Our music unit provides opportunities for faculty to learn about the music industry from current students.	95	1	7	3.57	1.74
Our music unit must continuously change its curriculum to keep up with our peer music units.	96	1	7	4.11	1.6
Our music curricula are aligned with the music industry.	95	1	7	4.24	1.6
Student needs are easy to predict in post-secondary music education.	97	1	7	3.01	1.2
Our music unit is successful in attracting external philanthropic support.	96	1	7	3.84	1.87
Our advancement or development office assists with seeking philanthropic support for our music unit.	96	1	7	4.6	1.91
Our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments].	97	1	7	4.11	1.89
The music discipline within higher education is rapidly changing.	97	2	7	5.97	1.17

The EP scale was examined for inter-item correlations. Each item was assessed for normality using histograms and all ten items were evaluated for correlations and significance

using the standard Pearson product-moment correlation for continuous variables (Cohen et al., 2003; Croker & Algina, 1986).

Many EP items were found to have significant correlations. These relationships often align with the content of the items. Items 1, 2, and 3 pertaining to forums for faculty to learn about the music industry exhibited moderate to high significant positive correlations (1 & 2, r = .71; 2 & 3, r = .57; 1 & 3, r = .53). These three items were also slight to moderately significantly correlated with item 5, "our music curricula are aligned with the music industry" (1 & 5, r = .48; 2 & 5, r = .51; 3 & 5, r = .28) suggesting that forums for faculty to learn about the music industry is positively associated with a music unit expressing curricular alignment with the music industry. Interestingly, item 6, "student needs are easy to predict in post-secondary music education.", was also slightly positively correlated with the curricular alignment in item 5 (r = .33) suggesting a positive association with the ease of predicting students' curricular needs and programmatic alignment with the music industry. Items 7, 8, and 9 pertaining to philanthropy and revenue streams of music units also displayed moderate to high significant positive correlations (7 & 8, r = .7; 7 & 9, r = .59; 8 & 9, r = .52).

Potentially consequential for higher music education are the weak but significant correlations between the learning forum items, 1, 2, and 3, and the revenue items, 7, 8, and 9. These correlations; 1 & 7, r = .4; 1 & 8, r = .32; 1 & 9, r = .34; 2 & 7, r = .38; 2 & 8, r = .22; 2 & 9, r = .36; 3 & 7, r = .29; suggest a positive association between the efforts made by music units to learn about the music industry and the successful acquisition of revenue apart from tuition. In the entire set of EP items, no item pairs exhibited significant, negative correlations.

The pervasive trend across the environmental perception scale is one of moderation. Music units are somewhat effective at perceiving their music industry environment and display a

wide range of individual responses to elements of their environmental perception. There is substantial agreement on the dynamic nature of the music discipline, however music units are somewhat split on how that state of flux is perceived in relation to their students' needs. Individual EP items highlight the potential positive associations between music industry exposure and revenue as well as music industry exposure and curricular alignment. Correlations between all EP items are displayed in Table 18.

Table 18
Inter-item Correlations in the Environmental Perception Scale

EP Item	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy.									
2. Our music unit provides opportunities for faculty to learn about the music industry from other music units.	.71**								
3. Our music unit provides opportunities for faculty to learn about the music industry from current students.	.53**	.57**							
4. Our music unit must continuously change its curriculum to keep up with our peer music units.	.15	.18	.14						
5. Our music curricula are aligned with the music industry.	.48**	.51**	.28**	.13					
6. Student needs are easy to predict in post-secondary music education.	.03	-.04	-.03	.00	.33**				
7. Our music unit is successful in attracting external philanthropic support.	.4**	.38**	.29**	.06	.29**	.11			
8. Our advancement or development office assists with seeking philanthropic support for our music unit.	.32**	.22*	.18	.03	.16	.13	.7**		

Table 18 (Cont.)

EP Item	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
9. Our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments].	.34**	.36**	.2	.26*	.18	-.05	.59**	.52*	
10. The music discipline within higher education is rapidly changing.	.25*	.17	.21*	.23*	.13	-.17	.2	.17	.25*

** $p < .01$ (two-tailed)
* $p < .05$ (two-tailed)

Relationships Between Organizational Adaptation Strategy and Environmental Perception

Research Question 3:

What is the relationship between organizational adaptation strategy and environmental perception?

This question was addressed through an evaluation of the Pearson product-moment correlations between the major composite variables involved in this study: OAS, |OAS|, EP, and the composite scores for each organizational adaptation strategy, decentralization, generalization, specialization, and formalization. Each variable was assessed for normality using histograms. Subsequently, each pair of variables was initially examined on scatter plots. In the case of OAS and |OAS| and the strategy composites, EP was used as the independent variable. Correlations for OAS, |OAS|, and EP address the overall relationship between organizational adaptation strategy and environmental perception. Correlations between individual composite scores and EP address the relationship between environmental perception and each independent organizational adaptation strategy.

The correlation between organizational adaptation strategy and environmental perception for the entire field, $r_{OAS.EP,}$ was slightly positive at .26, $p < .05$. This indicates that as

environmental perception increased music units trended toward strategies of generalization and decentralization, the "positive" end of the organizational adaptation typology spectrum. The low strength of $r_{OAS.EP,}$ can be further interpreted as a reflection of the aforementioned overall tendency toward generalization, since a greater magnitude would reflect decentralization. Music units in the aggregate trend toward generalization as environmental perception increases. The correlation between the |OAS| and environmental perception, $r_{|OAS|.EP}$, was moderately positive at .53, $p < .01$. This is compelling evidence to support the assertion that as environmental perception increases, music units engage in greater levels of adaptive action. Restated, as music units better understand the music industry, they have utilized greater total levels of organizational adaptation. On a general discipline level, the relationship between environmental perception and organizational adaptation strategy is broadly positive. Greater levels of environmental perception beget more adaptive action, and specifically coalescing toward generalization. Because several hypotheses relate to this group of correlations, all correlations are displayed together in Table 19.

Table 19
Major OAS Variable Correlations

Variable	1	2	3	4	5	6	7
1. EP							
2. OAS	.26*						
3. |OAS|	.53**	.38**					
4. Decentralization Composite	.47**	.7**	.88**				
5. Generalization Composite	.52**	.56**	.84**	.74**			
6. Specialization Composite	.16	-.16	.47**	.3**	.23*		

Table 19 (Cont.)

Variable	1	2	3	4	5	6	7
7. Formalization Composite	.43*	-.13	.83**	.53**	.6*	.33**	
8. Inaction Composite	-.58**	-.29**	-.79**	-.7**	-.66*	-.43**	-.64**

** p < .01 (two-tailed)
* p < .05 (two-tailed)

The second component of this research question concerns the four previous hypothesized relationships between organizational adaptation strategy and environmental perception. Hypotheses 1, 2, and 4, can be addressed via the correlations in Table 19. The third hypothesis involved the introduction of additional variables in order to address the Janusian coefficient.

Hypothesis 1: *As Environmental Perception increases, programs will trend toward decentralization*. In Table 19, the correlations between individual strategy composite scores and EP are Point-biserial correlations between the continuous EP scores and dichotomous strategy composite scores (Croker & Algina, 1986). The correlation between Decentralization and EP, $r_{.D.EP}$, was found to be .47, $p < .01$. This is a moderately strong correlation that when evaluated for the entire sample of music units, confirms this hypothesis. Music units scoring higher on the EP scale answered "yes" for greater numbers of decentralization items.

Hypothesis 2: *As Environmental Perception increases, programs will trend toward formalization.* The formalization composite score, reflecting the number of "yes" answers to formalization items was also found to have a moderate but less significant correlation with EP ($r_{.F.EP} = .43$, $p < .05$). This correlation confirms a positive association between EP and formalization, yet slightly less so than the association with decentralization. This hypothesis for music units as organizations, however, is still confirmed.

An important *post hoc* corollary to hypotheses 1 and 2 is an examination of the remaining correlations between EP and generalization and EP and specialization. The correlation between EP and specialization was low and insignificant ($r_{.S.EP}$ = .16, p > .05). This indicates the lack of a relationship between music units' environmental perception and their adoption of specialization strategy items. Contrastingly, the correlation between generalization and EP, ($r_{.G.EP}$ = .52, p < .01) was not only significant, but it was also the highest correlation of the four. This indicates that the strongest relationship between music units' environmental perception was with the organizational adaptation strategy of generalization. The greater music units understood the music industry the more they chose to generalize.

Hypothesis 3: *As Environmental Perception increases, programs will trend toward decentralization in some areas and formalization in other areas*. To evaluate this hypothesis, two new variables were created. For each music unit, a correlation between dichotomous decentralization items and dichotomous formalization items was calculated using Excel. This variable, $r_{.D.F}$ was evaluated for normality using a histogram and found to correspond to a normal distribution. The second step in this analysis compared $r_{.D.F}$ to EP using a scatterplot. The correlation between $r_{.D.F}$ and EP, the "Janusian coefficient" or r_j was found to be insignificant (r_j = .02, p > .05). This would indicate that hypothesis 3 was incorrect and a Janusian effect for music units was not observed. However, a second *post hoc* technique was used to further investigate a potential Janusian effect. As illustrated in Table 19, there was a moderate correlation between the decentralization composite score and the formalization composite score (r = .53, p < .01). In order to better evaluate this potential relationship in comparison to environmental perception, another variable was created, Sum.D.F, adding the decentralization and formalization scores for each respondent. The Sum.D.F variable, with a possible range of 0-

20, was evaluated for normality using a histogram ($\mu = 8.77$, $\sigma = 3.76$) and represents the total number of decentralization and formalization items receiving "yes" responses from each music unit. In contrast to $r_{j,}$ the correlation between EP and Sum.D.F was significant ($r = .52$, $p < .01$) suggesting that as environmental perception increases music units were more likely to utilize both more decentralization and formalization organizational adaptation strategies. While there was no association found between EP and the independent correlation between decentralization and formalization for each respondent, a moderately strong correlation exists between EP and the tendency of music units to adopt greater amounts of these two organizational adaptation strategies individually. Therefore, while inconclusive, the data suggest that some form of a Janusian effect for music units is in place and potentially warrants further investigation.

Hypothesis 4: *There is no relationship between Environmental Perception and Organizational Adaptation Strategy*. Because the aforementioned correlations between EP and OAS, and EP and |OAS|, were both significant, this hypothesis is not confirmed. There is a clear relationship between environmental perception and organizational adaptation strategy. Music units engage in greater total numbers of adaptive actions as environmental perception increases ($r_{|OAS|.EP} = .53$, $p < .01$.) and trend toward the decentralization/generalization end of the organizational adaption typology spectrum ($r_{OAS.EP} = .26$, $p < .05$.) as environmental perception increases. This hypothesis can be further confirmed by the correlation between EP and organizational adaptation strategies of inaction. The strong, negative correlation ($r_{I.EP} = -.58$, $p < .01$) mirrors the positive relationship between EP and |OAS|, or total adaptive action. As music units' environmental perception increased, they were less likely to choose strategies of inaction.

Inter-Item Correlations

To achieve a more granular understanding of the relationship between environmental perception and organizational adaptation strategy for higher music education, individual items and composite scores from the entire instrument were evaluated for correlative associations. First, all OAS items were evaluated for correlations with the composite EP score. Out of the 40 OAS items, 21 items were found to have significant correlations with overall environmental perception. Table 20 displays each OAS item with a weak but significant correlation to the composite EP score.

Table 20
Significant Correlations Between EP Composite and Individual OAS Items

Decentralization	*r*
We have hired new part-time faculty as program directors, coordinators, or department heads	.23*
We have differentiated admissions policies based on a students' intended program	.26**
Our leadership has focused on creating new divisions, areas, or departments	.22*
We have created new online programs	.33**
We have created new committees or administrative units	.25*
We have created new co-curricular programs, organizations, or activities	.34*
We have developed new partnerships with external organizations	.33**
Generalization	
We have created new courses in subjects where we previously had not offered instruction	.32**
We have hired part-time faculty in subject areas where we previously had no specialists	.33**
We have altered our audition policies to include greater varieties of musical style	.34**
Our leadership has focused on expanding the curriculum	.29**
We have broadened the activities of existing co-curricular programs	.37*
We have modified existing facilities in order to accommodate a broader range of activities	.36**
We have expanded the scope of our existing collaborations with external organizations	.39**

Table 20 (Cont.)

Specialization	
We have eliminated part-time faculty positions with specialties outside of our traditional offerings	.31**
Formalization	
We have created new courses to better fulfill aspects of our unit's mission	.29**
We have hired new full-time faculty as required by our mission or strategic plan	.24*
We have promoted one or more part-time faculty to full-time positions	.24*
We have increased oversight of committees or administrative units	.22*
We have increased administrative involvement in co-curricular programs	.34**
We have increased administrative involvement in external partnerships	.29**

** p < .01 (two-tailed)
* p < .05 (two-tailed)

All correlations in Table 14 are relatively weak, however, they highlight some interesting facets of the relationship between EP and OAS. In the decentralization strategy, music units with higher EP scores were associated with hiring new part-time faculty as program directors, coordinators, or department heads (r = .23, p < .05), and differentiating admissions policies for each program offered (r =.26, p < .01). Higher EP scores were also positively associated with "yes" answers to "our leadership has focused on creating new divisions, areas, or departments" (r = .22, p < .05) and the creation of new online programs (r = .33, p < .05). The creation of new committees or administrative units shared a weak positive correlation with EP (r = .25, p < .05) and creating new co-curricular programs, organizations or activities had the highest correlation in the decentralization group (r = .34, p < .05). Finally, music units with higher EP scores were more likely to respond that they had developed new external partnerships (r = .33, p < .05).

Generalization mirrored decentralization in the individual item correlations with 7 of 10 items possessing small positive correlations with total EP score. Both items pertaining to new subject areas were correlated with higher environmental perception: creating new courses in new subjects (r = .32, p < .01) and hiring part-time faculty in new subjects (r = .33, p < .01). Altering

audition policies to include greater varieties of music style was associated with higher EP scores ($r = .34$, $p < .01$) as was leadership focusing on the curriculum ($r = .29$, $p < .05$). Broadening the activities of co-curricular programs was found to have one of the higher inter-item correlations ($r = .37$, $p < .05$) and higher EP scores were associated with modification of existing facilities for a broader range of activities ($r = .36$, $p < .01$). The strongest of all inter-item correlations was the association between EP and music units expanding the scope of their existing collaborations with external organizations ($r = .39$, $p < .01$). Music units that perceive the music industry well are likely to deepen existing external partnerships. Interestingly, only one item in the specialization strategy was found to have a direct association with higher EP scores. The elimination of part-time faculty outside of traditional specialties was found to have a positive relationship with environmental perception ($r = .31$, $p < .01$) showcasing an intriguing manifestation of the specialization strategy.

Among the formalization OAS items, six were found to have positive association with EP scores. Music units were more likely to create new courses to fulfill aspects of their mission when they had higher EP scores ($r = .29$, $p < .05$). Both the hiring of full-time faculty as required by music units' missions and the promotion of part-time faculty to full-time positions had similar correlations to higher EP scores ($r = .24$, $p < .05$). In this way the strengthening of faculty through formalization was somewhat associated with higher environmental perception. Increased oversight of committees or administrative units had a very weak association with EP ($r = .22$, $p < .05$) but higher EP scores were slightly more correlated with increased administrative involvement in co-curricular programs ($r = .34$, $p < .01$). Finally, increased administrative involvement in external partnerships was found to have a mild correlation to higher EP scores ($r = .29$, $p < .05$).

Overall, this set of correlations demonstrates the relationships between total EP and individual OAS items. Many had small significant positive correlations. Consistent with the earlier analysis, the generalization items had the highest average correlation ($\mu = .34$) of any of the strategies further supporting the grand trend toward generalization. Standout relationships such as the stronger association with expanding existing external collaborations and tendency to eliminate part-time faculty merit further discussion. The relatively low average of all of these correlations ($\mu = .3$) and small spread ($\sigma = .05$) is indicative of the wide variation in organizational adaptation strategy undertaken by music units as well as the consistency of music units' behavior across each item. Music units with higher EP scores tended to adopt multiple actions in each strategy with remarkable homogeneity.

Individual EP items were then evaluated for correlations with the composite scores for OAS and the composite scores for each organizational adaptation strategy. These correlations are displayed in Table 21.

Table 21
Correlations Between Individual EP Items and OAS Composite Scores

Item	*Dec.*	*Gen.*	*Sp.*	*For.*	*In.*	*OAS*	*|OAS|*
1. Our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy.	.46**	.44**	.17	.32**	-.52**	.3**	.47**
2. Our music unit provides opportunities for faculty to learn about the music industry from other music units.	.38**	.36**	.07	.26*	-.43*	.26*	.37**
3. Our music unit provides opportunities for faculty to learn about the music industry from current students.	.23*	.25*	.03	.21*	-.27	.14	.25**
4. Our music unit must continuously change its curriculum to keep up with our peer music units.	.22*	.3**	.15	.14	-.37**	.17	.25**

Table 21 (Cont.)

Item	*Dec.*	*Gen.*	*Sp.*	*For.*	*In.*	*OAS*	*|OAS|*
5. Our music curricula are aligned with the music industry.	.29**	.34**	-.01	.13	-.29	.3**	.27**
6. Student needs are easy to predict in post-secondary music education.	-.04	-.03	-.26**	-.13	.17	.12	-.1
7. Our music unit is successful in attracting external philanthropic support.	.37**	.43**	.15	.45**	-.47**	.11	.47**
8. Our advancement or development office assists with seeking philanthropic support for our music unit.	.36**	.38**	.07	.36**	-.35**	.16	.4**
9. Our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments].	.21*	.36**	.17	.32**	-.39**	.05	.33**
10. The music discipline within higher education is rapidly changing.	.06	.21*	.24*	.21*	-.28*	-.08	.2

** p < .01 (two-tailed)
* p < .05 (two-tailed)

The individual EP items were found to have significant correlations with multiple organizational adaptation strategy composite scores. These correlations ranged from -.52 to .47 and many parallel the previously discussed relationships between the major variables in this study displayed in Table 19. Providing opportunities for faculty to learn about the music industry from experts outside the academy was found to be positively associated with strategies of decentralization (r = .46, p < .01) and generalization (r = .44, p < .01). This item also had a moderate association with |OAS|, or total adaptive action (r = .47, p < .01). Similarly, the relationship with inaction for this item was negative (r = -.52, p < .01). Opportunities to learn from experts outside the academy, EP item one, had weaker correlations with formalization (r = .32, p < .01) and with total OAS (r = .3, p < .01) but this correlation further supports the relationship between these learning opportunities and music units trending toward generalization and decentralization on the typography spectrum. The relative strength of the correlations for EP

item one highlights this as a particularly important component of music units' environmental perception.

Responses to "our music unit provides opportunities for faculty to learn about the music industry from other music units" displayed similar correlations with OAS composite scores to item one. There were weak associations with decentralization ($r = .38$, $p < .01$) and generalization ($r = .36$, $p < .01$), while the relationship with inaction was moderately negative ($r = -.43$, $p < .01$). Slight correlations were also found with formalization ($r = .26$, $p < .05$) and total OAS ($r = .26$, $p < .05$) with a stronger relationship to |OAS| ($r = .37$, $p < .01$). Mirroring EP item one, music industry learning opportunities from other music units was associated with music units scoring on the generalization and decentralization side of the organizational adaptation strategy typology spectrum. Incidentally, this particular item represents some degree of isomorphic behavior, as the actions of "peer" music units can be emulated. Although these correlations are relatively weak, they potentially signify an isomorphic component present in the organizational adaptation strategies.

The third EP item, "our music unit provides opportunities for faculty to learn about the music industry from current students" exhibited weaker relationships than the previous items. This item was found to have a mild correlation with decentralization ($r = .23$, $p < .05$) as well as generalization ($r = .25$, $p < .05$). Learning from students also was slightly correlated with formalization ($r = .21$, $p < .01$). Interestingly, this item was not found to have a significant relation with OAS, however, there was a weak correlation with |OAS| ($r = .23$, $p < .05$). This suggests that although opportunities for faculty to learn about the music industry from current students was positively related to music units taking more adaptive action, it was not related to music units trending toward either side of the organizational adaptation typology spectrum. The

correlations found for EP item three additionally indicate music units that do provide faculty with opportunities to learn about the music industry from current students likely exhibit a host of organizational adaptation strategies and were widely distributed across the organizational adaptation typology spectrum.

Institutional isomorphism is also reflected in EP item four, "our music unit must continuously change its curriculum to keep up with our peer music units". This item was found to have correlations mirroring those of the first two EP items. Decentralization had a weak correlation with EP item four ($r = .22$, $p < .05$). There was a stronger correlation found between EP item four and generalization ($r = .3$, $p < .01$), indicating a connection between curricular isomorphism and organizational adaptation strategies of generalization. This connection is also illuminated by the stronger, negative relationship with inaction ($r = -.37$, $p < .01$). Music units working to keep up with their peers were likely to engage in less total inaction. Although these are not strong correlations, they allude to the presence of large-scale isomorphic trends in higher music education.

Music units assessing their curricular alignment with the music industry in EP item five exhibited responses with correlations to decentralization ($r = .29$, $p < .01$), generalization ($r = .34$, $p < .01$), and |OAS| ($r = .27$, $p < .01$). In contrast to items three and four, this item was found to have a significant relationship with OAS ($r = .3$, $p < .01$). Music units indicating higher levels of accuracy to their curricular alignment with the music industry were more likely to score on the decentralization/generalization side of the organizational adaptation typology spectrum. This correlation is consequential as it buttresses the conclusion that music units adapting through predominantly decentralization and generalization strategies rate their curricula as more aligned with the music industry.

Music units exhibited contrasting responses to EP item six, “student needs are easy to predict in post-secondary music education”. This item was only found to be slightly negatively correlated with an organizational adaptation strategy of specialization ($r = -.26$, $p < .01$) indicating that as music units felt that students’ needs were easier to predict, they likely to score lower on the specialization composite scale. Although most EP items tended to have relationships with generalization and decentralization, it is notable that this item does not exhibit any additional correlations. The relationships between attracting external philanthropic support, EP item seven, and |OAS| was found to have the strongest positive correlation of all the EP items ($r = .47$, $p < .01$), providing further insight to the previously mentioned relationship between learning opportunities and philanthropic success. Music units engaging in greater amounts of total adaptive action had more robust attraction of external support. EP item seven additionally had positive associations with decentralization ($r = .7$, $p < .01$), generalization ($r = .43$, $p < .01$), and formalization ($r = .45$, $p < .01$), however, no relationship was found with specialization or OAS. This suggests that while overall change and adaptative action that are associated with attracting donations, music units utilizing a variety of organizational adaptation strategies are equally successful in their efforts. Further confirming this is the negative relationship between inaction and EP item seven ($r = -.47$, $p < .01$); the fewer adaptive actions a music unit engages in, the less likely they are to attract outside support.

Environmental perception as related to external resources was also reflected in EP items eight and nine, both of which were found to have strikingly similar correlations to the previously mentioned EP item seven. Music units that responded with high accuracy ratings to “our advancement or development office assists with seeking philanthropic support for our music unit” were associated with organizational adaptation strategies of decentralization ($r = .36$, $p <$

.01), generalization (r = .38, p < .01) and formalization (r = .36, p < .01), along with a stronger correlation to overall adaptive action (r = .4, p < .01). This item also was found to exhibit a negative relationship with inaction (r = -.35, p < .01). Multiple revenue streams as described in EP item nine displayed analogous correlations to EP items seven and eight: decentralization (r = .21, p < .05), generalization (r = .36, p < .01), formalization (r = .32, p < .01), |OAS| (r = .33, p < .01), and inaction (r = -.39, p < .01). Since EP items seven and eight had a strong correlation between them (r = .7, p < .01), as did EP items seven and nine (r = .59, p < .01), this pattern further supports the association between philanthropic success and total adaptive action. The previously mentioned correlations between EP items 1, 2, 3 & 7, 8, 9 also suggest that the association between total adaptive action and success in securing outside funding may also be connected to music units providing any kind of opportunities for faculty to learn about the music industry.

The final EP item, "the music discipline within higher education is rapidly changing" was found to have small positive correlations with generalization (r = .21, p < .05), specialization (r = .24, p < .05) and formalization (r = .21, p < .05), along with a small negative correlation to inaction (r = -.28, p < .05). Interestingly, this item had no relationship with OAS or |OAS|, highlighting the tendency for music units to rate this item highly regardless of how they behave as organizations. Although music units overwhelmingly believed their discipline was changing, the low correlations between EP item ten and the organizational adaptation strategies signify that this belief did not lead music units to adopt consistent organizational adaptation strategies.

To complete the examination of the relationship between environmental perception and organizational adaptation strategy, the ten EP items were assessed for correlations with all 40 individual items from the OAS scale. This analysis did not produce any significant insight via

strong inter-item relationships. However, many item pairs exhibited low yet significant correlations. These correlations are organized by organizational adaptation strategy and presented in *Appendix VI*.

Variations by Institutional and Leader Characteristics

Research Question 4:

How do music programs' organizational adaptation strategies and environmental perception vary by institutional and leader characteristics?

Descriptive statistics for the major variables in this study were analyzed across each of the institutional and music leader characteristic sub-sets, specifically, comparing the means for OAS, |OAS|, and EP across each group. Means of each organizational adaptation strategy composite score were also compared to discover differences between groups. Finally, groups in each institutional or leader characteristic were evaluated across the important correlations in this study; $r_{EP.OAS}$, $r_{EP.|OAS|}$, $r_{EP.D}$, $r_{EP.G}$, $r_{EP.S}$, $r_{EP.F}$; to evaluate whether the relationship between environmental perception and organizational adaptation differs by groups within each characteristic. In several cases, groups were recoded and combined to accommodate for small group size.

Because of the sample in this study included only two free-standing institutions disaggregating by organizational type, free-standing or embedded, was not possible. Additionally, the groups for each region were not large enough for a meaningful comparison and distinct enough that combinations would not produce a relevant interpretation. Therefore, these two variables were omitted from the demographic analysis. The other five demographic variables exhibited a more even split facilitating this analysis. Organizational status, public or private, exhibited highly similar results when examined by group. Public music units averaged slightly

higher OAS scores (μ = 4.33) than private institutions (μ = 3.5) but all other mean scores were very close. This suggests that although public institutions scored slightly more toward the decentralization/generalization end of the organizational adaptation typology spectrum, within individual organizational adaptation strategies organizational status made comparatively little difference in music units' choices of the OAS or EP items.

Relationships between environmental perception and organizational adaptation strategy displayed similar patterns to the overall relationships previously displayed in Table 19. Private institutions exhibited a small correlation between EP and OAS (r = .42, p < .05) and no such relationship was found for public institutions. The correlations between EP and total adaptive action, |OAS|, were similarly moderate for both public music units (r = .55, p < .01) and private music units (r = .61, p < .01). Within the individual organizational adaptation strategies, relationships were also similar. Public and private music units were found to have small to moderate positive relationships with decentralization (public: r = .46, p < .01; private: r = .52, p < .01), generalization (public: r = .5, p < .01; private r = .64, p < .01), and formalization (public: r = .5, p < .01; private: r = .45, p < .01). Interestingly, although the entire sample did not exhibit a correlation between specialization and EP, public music units as group displayed a small positive correlation (r = .29, p < .05). The results of the comparison between public and private music units are displayed together in Table 22.

Table 22
Institutional Characteristic Comparison: Public v. Private Status

Status	*N*	*μ OAS*	*μ |OAS|*	*μ D Sum*	*μ G Sum*	*μ S Sum*	*μ F Sum*	*μ I Sum*
Public	57	4.33	26.26	4.63	6.04	2.65	4.16	22.11
Private	36	3.5	26.61	4.5	6.06	2.44	4.56	22.36
Status	*N*	*μ EP*	$r_{EP.OAS}$	$r_{EP.\|OAS\|}$	$r_{EP.D}$	$r_{EP.G}$	$r_{EP.S}$	$r_{EP.F}$
Public	57	39.77	.13	.55**	.46**	.5**	.29*	.5**
Private	36	41.86	.42*	.61**	.52**	.64**	-.01	.45**

** p < .01 (two-tailed)

* p < .05 (two-tailed)

Music unit size by enrollment of music majors was assessed by combining several NASM size groups together to accommodate for uneven group size. Responses were recoded to create only two categories for comparison, music units enrolling fewer than 200 music majors (*n* = 62) and music units enrolling over 200 music majors (*n* = 32). These groups displayed noticeable differences in results for each major variable in the study. Music units with greater than 200 majors averaged higher scores on the OAS scale (μ = 5.16) than music units with less than 200 majors (μ = 3.52). Similarly, larger music units engaged in more average adaptive actions than smaller music units. Across the organizational adaptation strategy composite scales, larger music units scored consistently higher on each composite: decentralization: μ = 4.13, < 200, μ = 5.47, > 200; generalization: μ = 5.5, < 200, μ = 7.03, > 200; specialization: μ = 2.13, < 200, μ = 3.06, > 200; and formalization: μ = 3.97, < 200, μ = 4.87, > 200. These differences are reflected in the means for inaction, μ = 23.79, < 200, μ = 19.31, > 200, highlighting the fact that larger music units responded "yes" to more OAS items on average.

The correlations between EP and OAS scales when separated by size groups also bare similarities to the total sample correlations in Table 19. Neither size group displayed a relationship between EP and OAS, however, both groups displayed moderate positive relationships between EP and |OAS| score composites: < 200: r = .54, p < .01; > 200, r = .46, p < .01. Moderate correlations also existed between EP and decentralization and generalization for both groups. In the case of smaller music units, there was a moderate correlation between EP and formalization, r = .49, p < .01, but this relationship was not significant for larger music units. All major variable comparisons for both size groups are displayed in Table 23.

Table 23
Institutional Characteristic Comparison: Music Major Enrollment Size

Size	*N*	*μ OAS*	*μ |OAS|*	*μ D Sum*	*μ G Sum*	*μ S Sum*	*μ F Sum*	*μ I Sum*
< 200	62	3.52	24	4.13	5.5	2.31	3.97	23.79
> 200	32	5.16	30.78	5.47	7.03	3.06	4.87	19.31
Size	*N*	*μ EP*	$r_{EP.OAS}$	$r_{EP.\|OAS\|}$	$r_{EP.D}$	$r_{EP.G}$	$r_{EP.S}$	$r_{EP.F}$
< 200	62	38.23	.19	.54**	.42**	.51**	.06	.49**
> 200	32	45.34	.3	.46**	.46**	.48**	.15	.31

** p < .01 (two-tailed)
* p < .05 (two-tailed)

The categories for degrees conferred by music units were combined to create three groups reflecting the highest degree granted: bachelors, masters, or doctoral. There were pronounced differences between bachelors granting music units and music units granting graduate level degrees, but those distinctions mostly disappeared when comparing masters-granting and doctoral granting music units. Bachelors granting music units exhibited lower average OAS and average |OAS| scores, 3.41 and 23 respectively. This suggests that music units granting only baccalaureate level degrees engaged in less adaptive actions and trend more toward the center of the organizational adaptation typology spectrum, closer to generalization and inaction. Music units without graduate level programs also averaged lower scores on decentralization (μ = 3.95), generalization (μ = 5.3), and formalization (μ = 3.73) composite scales. Confirming this tendency to not employ adaptations is the higher inaction composite average score (μ = 24.68) for these music units. Additionally, bachelors-granting music units had a lower mean EP score (36.68) that the graduate level music units in this sample. Within music units granting graduate degrees, doctoral music units had higher decentralization and generalization averages; 6.17 and 7.17 respectively. This supports the trend toward generalization within the field and also suggests that doctoral-granting music units on averaged answer “yes” to more than 70% of the generalization OAS items. Doctoral music units also

averaged higher specialization items (μ = 4) than the other two groups suggesting that those music units granting terminal degrees also engage in some amount of specialization. This is particularly interesting in light of the relatively low overall specialization composite average (μ = 2.55).

The relationships between EP and OAS variables across degree groups reflected a mixture of correlations. Bachelors-granting music units exhibited a similar correlation pattern to the total sample with relationships found between EP and OAS (r = .33, p < .05), |OAS| (r = .64, p < .01), decentralization (r = .55, p < .01), generalization (r = .57, p < .01), and formalization (r = .56, p < .01). Music units where the highest degree granted was at the masters level only displayed a correlation between EP and the generalization composite (r = .39, p < .05). The doctoral-granting group was very small (n = 12) but environmental perception in this group was found to be related to the total adaptive action (r = .66, p < .05), generalization (r = .62, p < .05), and formalization (r = .65, p < .05). The results of comparing music units by degrees conferred more broadly suggest that the level of credential awarded matters for the type of organizational adaptation strategies music units employ but has little bearing on the relationship between environmental perception and organizational adaptation strategy. All results of these comparisons are displayed in Table 24.

Table 24
Institutional Characteristic Comparison: Degrees Conferred

Degree	*N*	*μ OAS*	*μ |OAS|*	*μ D Sum*	*μ G Sum*	*μ S Sum*	*μ F Sum*	*μ I Sum*
Bachelors	44	3.41	23	3.95	5.3	2.34	3.73	24.68
Masters	33	5.45	28.3	5.09	6.7	2.33	4.55	20.82
Doctoral	12	4.67	34.33	6.17	7.17	4	5.42	16.42
Degree	*N*	*μ EP*	$r_{EP.OAS}$	$r_{EP.\|OAS\|}$	$r_{EP.D}$	$r_{EP.G}$	$r_{EP.S}$	$r_{EP.F}$
Bachelors	44	36.68	.33*	.64**	.55**	.57**	.03	.56**
Masters	33	44.52	.15	.32	.25	.39*	.21	.18
Doctoral	12	43.17	.03	.66*	.49	.62*	.46	.65*

** p < .01 (two-tailed)

* p < .05 (two-tailed)

Despite the large variety of degrees and courses offered by music units (NASM, 2020) music leader backgrounds, the music leaders in this sample were clustered within classical performance (n = 49) or music education (n = 30). All other categories were combined (n = 15) to facilitate comparisons. Results across these three groups were remarkably consistent in each variable with music educators averaging only slightly lower OAS scores (μ = 3.6) than classical performers/composers (μ = 4.71). Within the context of the other similar means for individual organizational adaptation strategies however, this small difference is not noteworthy. Music leaders with backgrounds apart from classical music or music education did exhibit slightly lower averages across each variable with the most pronounced difference on the decentralization composite scale (μ = 4). These results suggest that while the music leader background may not be an important factor in music units' organizational adaptation strategy, the small group size for other categories leaves this particular comparison inconclusive.

Comparing the relationship between environmental perception and organizational adaptation strategy by music leader background yielded similar results to the overall sample. Among classical musicians, moderate correlations existed between EP and |OAS| (r = .5, p < .01), as well as EP and decentralization (r = .42, p < .01), generalization (r = .51, p < .01) and formalization r = .5, p < .01). Music leaders with backgrounds in music education displayed correlations between EP and OAS (r = .47, p < .01) and |OAS| (r = .78, p < .01). Within this group there was a strong relationship between EP and decentralization (r = .8, p < .01) and EP and generalization (r = .71, p < .01). This may be due to smaller group size. A moderate relationship between EP and formalization (r = .53, p < .01) was also found. Because of the similarities in correlation patters to the entire sample, music leader background seems unlikely to

be a critical factor in the relationship between environmental perception and organizational adaptation strategy, however, the other categories were too small to evaluate, therefore these results are also inconclusive. Table 25 displays the comparisons between music leader background groups.

Table 25
Music Leader Characteristic Comparison: Primary Background

Background	*N*	*μ OAS*	*μ |OAS|*	*μ D Sum*	*μ G Sum*	*μ S Sum*	*μ F Sum*	*μ I Sum*
Classical Performance /Composition	49	4.71	26.84	4.84	6.1	2.61	4.22	22.18
Music Education	30	3.6	26.33	4.47	6.03	2.7	4.33	22.17
All Other	15	2.93	24.53	4	5.73	2.13	4.33	22.73
Background	*N*	*μ EP*	$r_{EP.OAS}$	$r_{EP.\|OAS\|}$	$r_{EP.D}$	$r_{EP.G}$	$r_{EP.S}$	$r_{EP.F}$
Classical Performance /Composition	49	40.8	.23	.5**	.42**	.51**	.13	.44**
Music Education	30	41.5	.47**	.78**	.8**	.71**	.25	.53**
All Other	15	38.47	-.18	.3	-.02	.36	.02	.49

** p < .01 (two-tailed)
* p < .05 (two-tailed)

Because the music leaders in this sample held predominantly the position of department chair or department head, all other current positions were recoded into one category to create a comparable group. Department chairs averaged lower scores on all major variables with the most pronounced differences occurring on the EP composite (department chair/head, $\mu = 4$; other $\mu = 39.19$) and |OAS| (department chair/head, $\mu = 3.96$; other $\mu = 4.38$). Individual organizational adaptation strategy scores for department chairs were approximately .5 lower than the other combined group. These results suggest that positions traditionally ranking higher than department chair, such as dean, scored closer to the decentralization/generalization end of the

typology spectrum and engaged in nearly 5% more adaptive actions across all organizational adaptation strategies.

Correlative results of the music leader current role comparison exhibited some distinctions between groups. For department chairs, there was no relationship between EP and OAS yet for other positions, mostly higher, a small correlation was found ($r = .45$, $p < .05$). Department chairs were also found to have a higher correlation between EP and |OAS| than those in other positions, $r = .6$, $p < .01$, and $r = .45$, $p < .05$ respectively. Both groups displayed a relationship between EP and decentralization, (department chairs, $r = .48$, $p < .01$; other, $r = .47$, $p < .05$) but positions other than department chair showed a stronger association between EP and generalization (department chairs, $r = .51$, $p < .01$; other, $r = .64$, $p < .01$). While the "other positions" group had no correlations between EP and specialization or formalization, department chairs did exhibit relationships between these variables, $r_{EP.S} = .32$, $p < .01$; $r_{EP.F} = .54$, $p < .01$. Together these results, though similar to the overall sample, do suggest that department chairs with higher EP scores were more likely to employ specialization strategies than those in other positions. In the context of this study, music leaders' current position does matter from the perspective of organizational adaptation. Higher ranking positions displayed detectably more adaptive actions while lower ranking positions trended more heavily toward specialization. Table 26 displays means and correlations for the major variables by music leaders' current position.

Table 26
Music Leader Characteristic Comparison: Current Position

Position	*N*	*μ OAS*	*μ |OAS|*	*μ D Sum*	*μ G Sum*	*μ S Sum*	*μ F Sum*	*μ I Sum*
Department Chair/Head	68	3.96	25.49	4.41	5.9	2.44	4.16	22.71
All Other	26	4.38	28.46	5	6.35	2.89	4.6	21.12
Current Role	*N*	*μ EP*	$r_{EP.OAS}$	$r_{EP.\|OAS\|}$	$r_{EP.D}$	$r_{EP.G}$	$r_{EP.S}$	$r_{EP.F}$
Department Chair/Head	68	39.19	.16	.6**	.48**	.51**	.32**	.54**

Table 26 (Cont.)

All Other	26	44.46	.45*	.45*	.47*	.64**	-.17	.28

** p < .01 (two-tailed)
* p < .05 (two-tailed)

Results of the examining the data in this sample by institutional and music leader characteristics were mixed. Many results closely mirrored those of the overall sample. Comparing free-standing and embedded institutions was not possible and music unit public/private status did seem to have a slight effect on organizational behavior. Music unit size by music major enrollment displayed the most pronounced differences between groups and degrees conferred also showed some slight group differences. The backgrounds of music leaders made little difference in the major variable results, however, music leaders' current position did display some variation within the type and amount of organizational adaptation employed. Although in all cases interpreting this data was tempered by small group sizes, there were no groupings in which the aggregate trend toward generalization was not clearly exhibited.

Chapter Summary

The major finding of this study of discipline-level organizational adaptation in higher education is a grand trend toward generalization. Across each domain of the study and across group types, music units most often employed adaptive actions consistent with an organizational adaptation strategy of generalization. The sample trended heavily away from specialization in almost any form with greater variation in organizational adaptation strategies of decentralization and formalization. Music units were also found to have modest environmental perception abilities with some intriguing inter-item relationships exhibited by the EP scale.

Consistent with the theoretical body of work presented in chapter two, music units displayed a moderate relationship between environmental perception and the tendency to employ

adaptive action. This trend also placed music units slightly toward the decentralization/generalization end of the organizational adaptation typology spectrum. Although no direct "Janusian" effect was observed, music units with higher EP scores did adopt greater numbers of decentralization and formalization adaptive actions. Individual item inter-correlations further illuminated the grand generalization trend, as well as specific relationships of potential significance to higher music education. Music unit size, degrees conferred, and music leaders' current position were found to exhibit important differences across the major variables in this study.

Chapter V

Discussion

Overview of the Study

Higher education scholars and practitioners are preoccupied by change (Ruben et al., 2017). Paradoxically, although higher education in the U.S. has undergone centuries of metamorphosis, individual institutions and their programs have often exhibited exceptional permanence (Birnbaum, 1988; Gandre, 2001; Thelin, 2011; Wilder, 2013). Research on change in higher education is abundant, ranges from the theoretical (Cameron, 1984; Sporn 1999) to the practical (Christensen & Eyring, 2011; Hendrickson et al., 2013), and is highly concentrated on individual institutions, their constituents, and the sector as a whole (Bastedo, 2012; Bok, 2013; Bowen, 2011). In the long history of overlap between organizational studies and higher education (Bastedo, 2012), research on organizational adaptation at the discipline level is exceedingly rare (Sporn, 1999). Because of the paradigm-shifting digital revolution in the music industry beginning in the late 1990s (Tschmuck, 2017), music as a discipline, or higher music education, was selected as an ideal example to examine for a better understanding of single-discipline change.

The purpose for conducting this study was to describe, map, and explain the strategies that higher music education programs are using to adapt to the digital revolution in the music industry. Nine organizational adaptation theories from major organizational theorists (e.g., Aldrich, 1979; Cameron, 1984; Pfeffer, 1981) were used as a theoretical framework to evaluate organizational adaptation in higher music education. From these theories, the music industry was shown to be a turbulent environment (Aldrich, 1979; Daft & Weick, 1984; Krueger, 2019; Norgård, 2018; Tschmuck 2017) necessitating organizational adaptation and each theory was

examined for predicted responses to such a turbulent environment. The organizational adaptation theories in this study; population ecology, strategic choice, life cycles, institutional isomorphism, cybernetics, resource dependence, network organization, contingency theory, and symbolic action; also conceptualized environmental perception as the methods by which an organization understands its environment (Aldrich, 1979; Daft & Weick, 1984). Furthermore, drawing additionally upon Chaffee's (1985) models of strategy in organizational development and Khandwalla's (1979) well-known organizational design theories, an organizational adaptation typology spectrum was created as a measurement and evaluation tool for use in this study. The organizational adaptation typology spectrum located elements of each major theory across five separate organizational adaptation strategies: decentralization, generalization, specialization, formalization, and inaction.

The method used in this study was a cross-sectional survey. The survey population was music leaders; those holding the highest-ranking academic position in music departments, music schools, music colleges, and conservatories. I created a survey instrument that was distributed electronically to the music leader population (N = 543) using a database I created from public website and HEADS reports. The survey instrument contained 57 items; 10 items assessing environmental perception and 40 items to measuring organizational adaptation strategy across ten domains: curriculum, full-time faculty, part-time faculty, admissions policies, leadership, online curriculum, governance, co-curriculum, facilities, and external partnerships. Seven additional items were demographic in nature collecting information on the music leaders' backgrounds, current position, and the music units' size, location, degrees conferred, public/private status, and free-standing/embedded status. After four weeks of data collection, 100 responses were received for an 18.4% response rate.

There were four research questions in this study and the third question contained four hypotheses. Those questions were:

1. What organizational adaptation strategies are music programs utilizing to adapt to changes in the music industry?
2. How effectively do music programs perceive their environment?
3. What is the relationship between organizational adaptation strategy and environmental perception?
    i. Hypothesis 1: As environmental perception increases, programs will trend toward decentralization.
    ii. Hypothesis 2: As environmental perception increases, programs will trend toward formalization.
    iii. Hypothesis 3: As environmental perception increases, programs will trend toward decentralization in some areas and formalization in other areas.
    iv. Hypothesis 4: There is no relationship between environmental perception and organizational adaptation strategy.
4. How do music programs' organizational adaptation strategies and environmental perception vary by institutional and leader characteristics?

The results of this study suggest a broad discipline-wide trend toward the organizational adaptation strategy of generalization. Although formalization and decentralization were favored in several domains, the trend toward generalization was found to be pervasive and strong. Organizational adaptation strategies of specialization were found to be seldom employed. In evaluating music units' environmental perception, the results were modest with a preponderance of music units scoring in the middle of the scale range. In support of one of the major theoretical

tenants of organizational adaptation (Khandwalla, 1977), music units with higher levels of environmental perception were associated with greater total amounts of adaptive action. Furthermore, greater environmental perception was also found to have the strongest positive association with a trend toward the specific organizational adaptation strategy of generalization. However, both hypotheses one and two were proven correct as music units did display correlations between environmental perception and decentralization and formalization respectively. Although a Janusian effect as described in chapter three and predicted by Cameron (1984) was not strictly observed, some elements of this effect did reflect in the data following *post hoc* analysis. Across the field, higher environmental perception abilities were negatively associated with inaction on the part of music units to alter elements of their organizations invalidating the fourth hypothesis. Within the survey instrument, many inter-item correlations and composite score correlations were found to exhibit potential significance for those in higher music education. Finally, music unit size, degrees conferred, and music leaders' current position were found to exhibit important differences in levels of organizational adaptation strategy, environmental perception, and their relative relationships. The remainder of this chapter will present a discussion of these findings along with the limitations of this study as well as recommendations for practice and further research.

Discussion

The Great Generalization

Over the past five years higher music education has undergone a great generalization in response to the digital revolution in the music industry. Several major components of the analysis align to paint this portrait of adaptive generalization: the prevalence of generalization item choices in the OAS frequency analysis, the composite OAS scores averaging in the

generalization range and the |OAS| score mean near the midpoint of the scale. Furthermore, in almost every case, analyzing relationships between composite scores and individual items highlighted stronger associations with generalization than the other organizational adaptation strategies. Clearly, music units have expanded their scope, functions, and activities across many areas of higher education. Although music units did change aspects of their organizational structure through decentralization and exerted more centralized organizational control via formalization, even in domains where generalization was not the dominant strategy it was heavily represented. This great generalization aligns with contemporary trends in both higher education and the music industry, and it is consistent with multiple major concepts in organizational adaptation theory.

From its earliest European incarnations higher music education focused on the divine and later the preeminent, classical, music of the enlightenment age (Butt, 2018; Gandre, 2001). This exclusive tradition was strongly passed on to higher music education's cousins in the U.S. and remained set until almost the middle of the 20th century (Miller, 1993). Despite the fact that musical genres indigenous to the American experience such as blues, jazz, rock, and hip-hop originated in the metaphorical backyard of some of the United States' most prestigious musical institutions, a striking conservatism within higher music education kept the discipline relatively narrow in scope, philosophy, and goals (Gandre, 2001; Kajikawa, 2019; NASM, 1999; Tschmuck, 2017). Given this history, the last five years have signified a remarkable explosion of higher music education's scope and range unlike any other period in its long history.

Curricular Expansion

More than 85% of music units now offer courses in subjects that only five years ago did not exist in their catalogs. Nearly 60% have added previously unrepresented courses in online

formats and almost half have hired full-time faculty with expertise new to that music unit. Supporting Miller's 1993 observation that music units often experiment with part-time faculty in new subjects, over 65% of music units have added part-time faculty with new expertise. The sum of these efforts is an exceptional increase in the diversity of post-secondary music curricula in the narrow timeframe of one cohort of undergraduate students. Interestingly, the curricular expansion has not been limited to the Western side of the Atlantic Ocean. As John Butt (2018) writes of higher music education in the U.K.: "virtually no music department has remained unaffected by the broadening of musical study" (p. 13).

Since the digital revolution began, musicians and scholars have written with exceptional power on the need for curricular reform, in particular, "option-rich curricula that involve student choice in tandem with carefully planned curricular options" (Myers, 2016, p. 304). Along with the result from this study that music units have also created new programs in large numbers, the addition of previously unrepresented courses in such a large percentage of music units is strong evidence to suggest that contemporary music students have dramatically more options for study than their predecessors. Gumport and Snydman (2002) differentiated between the "bureaucratic and programmatic structures" (p. 376) of academic organizations, and their research confirmed the general expansion of both over time allows more areas of knowledge to be legitimized by the academy, "a major intellectual role for society" (p. 403). As the music industry has broadened to contain new technology companies, require new skill sets, and grow on a global scale (IFPI, 2020; Kreuger, 2019), expansion of higher music education to include more specialties and disciplines is congruent with environmental change. The legitimation of exactly the skills called for by higher music education scholars such as entrepreneurship, technology, and multi-genre training (Kardos, 2018; Kertz-Welzel, 2018; Miller et al., 2017) through new programs

(decentralization) and courses (generalization) suggests that as a field, higher music education curricula is heading in a promising direction that more closely resembles its music industry environment.

Importantly, the vigorous pace of this change is notable. The addition of hundreds of new courses and scores of new programs into the music discipline may place significant strain on music units. Curriculum frequently drives expansion in higher education (Thelin, 2011) and yet, curriculum is resource-intensive (Bok, 2013). In music, there is little overlap between disciplinary specialties; the guitarist cannot teach oboe; thus, the addition of faculty is paramount (Butt, 2018; Miller, 1993; Stanley, 2016). New musical styles often require new equipment, updated technology, and renovated teaching and performance spaces (Miller, 1993). The last several decades have seen higher education engaged in an arms race on multiple fronts to compete for faculty and students with facilities, student services, and research capabilities (Bastedo, 2012; Bok, 2013; Thelin, 2011). Higher music education, often underfunded by parent institutions, must similarly compete through recording studio spaces, concert halls, diverse faculty, and aggressive recruiting (Miller, 1993). A side effect of the post-digital revolution music industry is the expectations that digitally empowered music students bring to their collegiate experience (Bennett, 2016). The music unit must have greater capabilities for music creation and instruction than an average musician can acquire via standard digital recording equipment and free tutorials on *YouTube* (Tschmuck, 2017; Waldron, 2013). This fact alone serves to propel competition among music units. Against the backdrop of high student expectations and needs (Bennet, 2007, 2016; Morris 2014), such a proliferation of music curricula does not come without personnel and facilities, inevitably leading to rising costs that music units must work to balance through successful recruitment, philanthropy, and other

revenue generation (Gandre, 2001). The fact that many more music units were found to be modifying facilities instead of building new facilities additionally speaks to this budgetary pressure. Indeed, this need for revenue was also reflected in the results of this study wherein revenue-related items on the EP scale were somewhat correlated with items reflecting music industry exposure and curricular alignment. There is a strong implication here that music units seeking to mold their activities to the music industry environment are potentially more successful in generating revenue apart from tuition. However intriguing, the causality of this result is not clear. Music units with effective fundraising operations may simply be the ones with the most resources to apply toward music industry-centric adaptation.

Higher Music Education Online

Online education, a domain in which generalization was heavily dominant, illustrates a new and promising frontier for higher music education. Institutions such as Berklee College of Music and The Julliard School that were early adopters in the online space have been able to establish a strong presence based upon brand recognition. While "offering courses and degrees in technology-rich distance formats is complex work" (Ruben, et al., 2017, p. 18), many other music units continue to enter the online market. In 2021, Oberlin Conservatory and The Manhattan School, two of the oldest conservatories in the U.S. (Gandre, 2001), both announced ambitious international collaborations for online programming (Manhattan School of Music, 2021; Oberlin, 2021). In higher education more broadly, the explosion of online education in the second decade of the 21st century has proved a nearly irresistible avenue of expansion for research universities, liberal arts colleges, community colleges, and nearly every institutional type (Alexander, 2020). This growth has resulted in mega-universities such as Arizona State University, Western Governors University, and Southern New Hampshire University

(Alexander, 2020; Bueller, 2015). In higher music education, the eventuality of analogous "mega" programs may come to pass. As music careers grow in diversity and globalize, greater numbers of students may choose to pursue musical training at affordable prices and in smaller certificates or other credentials. At a time when higher education's value proposition remains under assault from critics and pundits across the political spectrum (Alexander, 2020; Bok, 2013), a traditional music degree may be less desirable than skill-specific, online training from famous schools. As with all of higher education, music units that established a strong, early online presence with powerful advertising and global recruiting networks will be clear winners. It remains to be seen how late entrants to the online music education space will compete with established institutions. In another important comparison, online learning now reaches far beyond traditional higher education. Just as students worldwide can select "non-colleges" such as *EdX* and *Coursera* in lieu of older institutions, music students can select any number of for-profit websites and individual instructors with digital teaching empires (e.g., Artistworks, 2019). This type of online competition remains unexplored and extremely important to the future of higher music education; however, this study clearly indicates that music units of all types are aggressively pursuing the online space as a form of organizational adaptation.

Multiple Domains of Expansion

The great generalization in higher music education is not confined to teaching and learning. Not only have curricular offerings increased, but audition polices have become more inclusive in two-thirds of music units, administrative units have taken on more roles, and external partnerships have widened in scope. Slightly more than half of music units have even engaged in modifying their facilities to be more useful for a wider range of activities. Co-curricular programming has widened both through generalization and decentralization in over

half of music units. This kind of transformation is also evidence of experimentation on the part of administrators and faculty to explore opportunities and ideas. Creative approaches to addressing the new music industry such as Kelman's (2015) music entrepreneurship pedagogy encourage music units to engage in the accretion of activities.

Musically broadening audition policies, indicated by almost two-thirds of music units, is a particularly notable adaptation specifically called for by an impressive number of musicians and scholars (Ayers 2009; Bennett, 2007; Kajikawa, 2019; Kardos, 2018; Kertz-Welzel, 2018; Koza, 2008; Norgård, 2018; Palmer, 2011; Snell & Söderman, 2014; Tschmuck, 2017; Waldron, 2013; Wilder, 2013). This adaptation strategy corresponds directly with the legitimation of music (Gumport & Snydman, 2002) and long overdue diversity efforts within higher music education (Kajikawa, 2019). Expanding the access to higher music education is directly in line with the music industry trends toward a wide variety of popular genres (IFPI, 2020) and a recognition of historical discrimination (Negus, 1998). The most promising feature of this result is the potential to bring a new chorus of voices into higher music education in the future. Inclusive auditions produce more diverse incoming cohorts, these produce more diverse (musically and demographically) graduates. Some of those may go on to graduate study and eventually become the next generation of higher music education's faculty (Posselt, 2016). Thus, the broadening of audition policies could have profoundly positive ripple effects in the decades to come.

Expanding external partnerships, as well as adding new ones, is a key element of the 2021 Barnes & Noble *College 2030* report. Deeper relationships with high schools and corporations are specifically recommended as critical forward-looking strategies for higher education in the 21st century. Mirroring this recommendation, the music industry has begun some meaningful efforts to increase diversity and access including promising new partnerships

with Historically Black Colleges and Universities, an effort that both aims to address diversity issues in the industry and expand ties to higher education (NARAS, 2019). It follows that the 57.4% of music units actively expanding their relationships with partner organizations may be engaging in similar efforts. Generalization in co-curriculum through broadening existing programs as well as adding new programs through decentralization were both utilized by at least half of responding music units. Since co-curricula and external partnerships are frequently aligned through service-learning programs, internships, and other outreach activities (Thelin, 2011) music units in the post-digital music industry may be actively looking at external opportunities for additional student experiences. As Kelman and Cashman's 2019 study on music festivals in India illustrates, the value of students working and learning in music industry settings external to the music unit is exceptionally high. Prior to the digital revolution, Miller (1993) advised music units to seek partnerships outside of their institutions. In this study, nearly the entire sample (87.2%) indicated they had not terminated external relationships. All results in the external partnerships domain speak to the importance that music units place on outside relationships and the potential for future research in evaluating the position of higher music education organizations within the larger music ecosystems of their communities.

As with curricular expansion, other elements of the great generalization are also conducive to the accretion of costs. Broadening auditions across more styles of music necessitates support structures to nurture new students such as scholarship funds, advising, and equipment. External program expansion also demands more from current administrators and staff to supervise, even in cases of those music units with robust benefactors. Online program development demands high-end technological infrastructure as well as specific adaptations for

music technology and software, all of which may place further strain on a music unit's bottom line.

A deeper examination of the organizational adaptation strategy results elucidates potential ways that music units are working to balance the costs of expansion. Within domains commonly regarded as the "core" of academic organizations such as full-time faculty, curriculum, and co-curriculum (Hendrickson et al., 2013), music units exhibited more formalization and decentralization, corresponding to classic organizational adaptation theory (Cameron, 1984). Domains representing more "fringe" activities such as external partnerships, online curriculum, and part-time faculty (Bok, 2013; Miller, 1993) exhibited comparatively more generalization. Music units perhaps employed generalization more often in domains where experimentation would be less likely to impact their main objectives as an organization. Single online courses are cheaper to produce than entire online programs, adding an extra program with a trusted partner maybe be cheaper than creating a new relationship from scratch, and part-time faculty generally cost less than full-time faculty (Alexander, 2020). In each instance, the generalization strategy is potentially more efficient and less committal than a strategy of decentralization or formalization. Music units, therefore, may be employing generalization strategies in order to compete in new areas while controlling costs and accommodating existing resources.

Context of the Great Generalization: Tradition Versus Vocation

The types of generalization observed in this study and the inertia toward expansion, when accounting for strong responses to decentralization items, is consistent with the history of higher education. During higher education's "golden age", Thelin (2011) writes that new public policy attention to higher education had "set into motion the dramatic expansion of enrollments as well

as numerous curricular innovations" (p. 261) in the mid 20th century. Enabling more students to take part in higher education than ever before also led to the growth of higher music education on a national level, continuing the westward expansion of collegiate music programs begun in the previous century (Gandre, 2001; Miller, 1993). This massive expansion of higher education in the U.S. ultimately led to two opposing forces relevant to the great generalization.

Even as music expanded into more institutions, as previously mentioned, music as a discipline has shown phenomenal resistance to change (Cloonan & Williamson, 2018; Gandre, 2001; Kajikawa, 2019; Myers, 2016). Miller (1993) sums up this resistance as a philosophical viewpoint of musicians: "to be a music performer or music teacher or music therapist or music anything one must first be a musician" (p. 49). This attitude, encapsulated in the NASM standards for accreditation that prescribe curricular elements (NASM, 2020), has historically enforced generalization as a defense mechanism for academic music programs. Instead of legitimizing new types of musical skills through true programmatic evolution, music has elected to occasionally add elective subjects or part-time faculty without ever rethinking or reimagining its core perspectives (CMS, 2014). This type of refusal to acknowledge new developments in music as art and music as industry; hip-hop is a critical example; reflects precisely the type of institutional discrimination critique leveled at higher music education today (Kajikawa, 2019; Palmer, 2011; Snell & Söderman, 2014). Therefore, as music has "expanded its umbrella to encapsulate hybrid endeavors without breaking into separate departments" (Miller, 1993, p. 50) in decades past, a continuation and clear acceleration of this trend in the 21st century is historically consistent.

As Thelin's (2011) "golden age" of higher education drew to a close, economic and market forces began to impact higher education in a profound and unprecedented way. Rising

costs of higher education, falling public investment, globalization, and neoliberal political ideology among other trends began to push higher education harder in a vocational direction (Bok, 2013; Mettler, 2014; Thelin, 2011). Pressure both internally and externally on higher education to provide greater levels of career-focused training has driven considerable expansion of the enterprise through strategies that in this study correspond to both decentralization and generalization. Thelin (2011) specifically relates new credentials and co-curricular programming to the drive for graduate employability in the marketplace: "new programs leading to 'badges', certificates, or internships all signaled increased concern for professional and job preparation regardless of a student's major" (p. 424).

Music as a field has been hit hard by the market forces and neoliberal philosophies of employability (Butt, 2018). In contrast to traditional attitudes about music as a core attribute of the enlightened and educated human (Gandre, 2001), the contemporary music student is aware of their own need to commercialize their skills (Bennett, 2016). This awareness has not completely gone unnoticed. As Harrison and Grant (2016) write, "another reason for the elusiveness of desirable graduate attributes in the music sector is the disquieting pace of change of career opportunities and practices in the music industry" (p. 210) demonstrating the difficulty academia faces in keeping pace with a sector as volatile as music and entertainment. The incredible consistency of this study's participants when responding to the EP item "the music discipline within higher education is rapidly changing" is further evidence that Harrison and Grant (2016) are accurate in their perceptions. Simply put, many music leaders feel their field is changing quickly, and they will try just about anything to "keep up". Given the range of results in this study however, higher music education is also *not* completely in-touch with the music industry. An opposing and intriguing critique that "music departments as a whole have emerged relatively

unscathed from the employability agenda or are failing to engage with it" (Cloonan & Williamson, 2018, p. 118) may account for the fact that across the data analysis from this study, individual results, such as the inaction composite score, highlight the fact that despite the digital revolution, some music units are taking very little adaptive action of any kind.

Higher education has traveled the long roads of decentralization and generalization for the last two centuries, arriving in the 21st century as a tremendously complex sector (Thelin, 2011; Wilder, 2013). In music, the great generalization can be contextualized within the historical patterns of higher music education's resistance to change and the legitimation of new musical developments (Kajikawa, 2019; Miller, 1993), and the influence of vocational training and market forces on musical study (Cloonan & Williamson, 2018). The findings of this study pose a central question for higher music education: Is the great generalization good?

Downstream Effects of the Great Generalization

The ultimate value and downstream effects of the great generalization can be examined from the perspective of individual music units and the perspective of the music discipline as a whole. For any given music unit, expansion of activities and offerings that begets increases in enrollment would certainly be viewed positively. Enrollment increases are present in many strategic plans and often viewed as institutional progress (Buller, 2015; Thelin 2011). As long as such enrollment increases can offset additional costs, generalization can move the music unit forward in its goals and mission. The risk to the individual music unit of a generalization strategy is the addition of too many options without requisite enrollment growth. New faculty, online infrastructure, or external partnerships that are not met with enthusiasm from students and increased applications may be viewed as unsuccessful experiments and a drain on the entire music unit (Christensen & Eyering, 2011; Miller, 1993). Derek Bok (2013) writes how "many

colleges have acquiesced, at least partially, to the widespread impulse to concentrate too much on vocational preparation" (p. 392) and this trend in higher music education may result in music units using a generalization strategy to "chase" the music industry to the point where there are more courses and activities than students to benefit from them. Without effective leadership and planning, the risk of generalization is doing nothing well. Almost 70% of responding music units indicated they had been developing a new strategic plan (formalization), but their organizational behavior suggests those plans include significant generalization. This balance in higher education between focused strategy and omni-directional growth is reflected in Bueller's (2015) critique of strategic planning: "when the institution's attention is always focused on what's stronger, bigger, larger, and better, strategic plans become expansion plans" (p. 110). Generalized expansion also risks placing increased burdens on those not directly involved in instruction. Since nearly two-thirds of music units have expanded the functions of committees or administrative units to accommodate for their increases in scope and function, this may prove unsustainable without additional staff to support the music unit. With the exception of those music units possessing large endowments or boundless resources, the administration of daily functions could present a human and financial bottleneck to music units expanding their activities across so many areas (Miller, 1993). Ultimately, this study intended to assess higher music education as a field, but many questions about individual music units remain. The great generalization on a unit-level suggests that while students may have more options than ever before, faculty and administrators must work to balance demand, costs, and overall mission to ensure success.

From the perspective of higher music education, the great generalization is likely a resounding success. The music industry has become eminently broad, encompassing new fields, technologies, corporate sectors, and entire professions that did not exist only a decade ago

(Benett, 2016; Kelman & Cashman, 2019; Krueger, 2019; Tschmuck, 2017). A corresponding generalization of higher music education is entirely appropriate to this radical environmental change. The central question is whether an expansion across all music units will produce too many graduates in new and traditional areas for the music industry to absorb. Most promisingly in this area, the boundary spanners in the music industry are myriad (Hirsch, 1972) and traditional boundary spanners such as managers, concert promoters, and artists and repertoire agents have been joined by an enormous number of "digital" boundary spanners as of this writing such as social media marketing experts, computer algorithm coders, video game music supervisors, and blockchain experts (Krueger, 2019; Smith & Telang, 2016). As long as the music industry continues to evolve new careers and new disciplines – as well as new genres of music for performance and scholarship – the great generalization in higher music education may only accelerate.

One potentially problematic side-effect of the great generalization is increased competition between music units. When music units regardless of size, location, or historical tradition begin to offer similar programs, courses, activities, faculty expertise, and opportunities, students may be less equipped to differentiate between their many options for musical training. Bok (2013) explains that "competition among institutions creates a constant pressure to respond to student needs, while also generating much effort to improve and excel" (p. 22). Since all music units are facing the same digital revolution and working to respond to the same needs (Bennett, 2016; Kardos, 2018; Sarath et al., 2016), the risk of mission creep and isomorphic tendencies is exceptionally high (Bastedo, 2012; Bok, 2013; DiMaggio & Powell, 1983).

Several additional larger forces may also exacerbate this competition. The afore-mentioned growth in online music education across for-profit and non-profit organizations

worldwide might become ubiquitous enough that fewer students seek traditional music degrees. The digital revolution in the music industry has been a global revolution, and no music unit is immune to these forces (Butt, 2018; IFPI, 2019; Tschmuck, 2017). Although many international students seek to study in the United States (Choi, 2009), if music units worldwide begin to imitate each other many students may elect to pursue their musical training in their home countries if no distinct advantage is offered by going abroad. Online education and international isomorphism would not pose as much of a hazard to domestic music units if not for the projected demographic decline in traditional college-age students (Grawe, 2018). Together these three trends align to produce heightened competition between music units at exactly the same moment that so many are undergoing significant expansion.

Theoretical Perspectives on Generalization

The great generalization in higher music education can be evaluated from the perspective of each organizational adaptation theory. On the organizational adaptation typology spectrum presented in chapter 2 (Figure 2), the theories describing a strategy of generalization are population ecology, strategic choice, resource dependence, and cybernetics. From the population ecology perspective, music units adopting generalization strategies allows them to move outside of their narrow range of activities:

> Some organizations that are unable to acquire enough resources by specializing in a limited range of products or services manage to survive by becoming generalists… a generalist is able to appeal to the diverse segments of a heterogeneous population and compensate for the low environmental capacity supporting its original form. (Aldrich, 1979, p. 213)

The historical reliance of music units on only a few musical genres and types of programs offered (Myers, 2016; NASM, 1999) would suggest that organizational behavior of generalization stems from the difficulty in acquiring resources in a small environment. Hilbun (2013) describes students in higher education as both resources in the form of tuition dollars and a measure of environmental demand. By this metric, the resources generated in predominantly classical music programs have been insufficient to sustain those organizations. This would align with the curricular expansion and broadening of audition policies found in this study. Furthermore, demand by musicians for a broader variety of training and opportunities to match the changing music industry would also spur this change in environmental "niche shape" by music units (Aldrich, 1979; Tschmuck, 2017). In fact, Aldrich (1979) and population ecology theorists would expect that those organization types participating in an "enrollment economy" (p. 213) to significantly expand their activities to meet market demands for services. Higher music education is uniquely based upon enrollment as many basic course types, such as ensembles, require musicians to be able to perform (Stanley, 2016). Therefore, the great generalization in higher music education is consistent with explanations found in population ecology theory (Aldrich, 1979).

Working to meet new market demands ascribes agency to organizational leaders in Child's 1972 strategic choice theory: "strategic action may include a move into or out of given markets in order to try and secure a favorable demand" (p. 17). In this respect, music units can be described as pushed by music leaders into new markets more suitable to their needs for students, revenue, and, as is common in higher education, prestige (Bok, 2013). The most interesting result of this study in relationship to the strategic choice theory is the wide range of behavior directly exhibited by music leaders. Well over half of music units adopted new strategic plans

(formalization), worked to reinforce existing strengths (specialization), and focused on expanding the curriculum (generalization). This implies that music leaders view a variety of strategies as critical to their success. Reinforcing existing strengths and developing new curricula and programs maybe be opposing manifestations of the same strategic action by music units. The great generalization additionally locates the majority of music units within the *domain offense* strategy described in strategic choice theory (Cameron, 1984; Child, 1972; Sporn 1999). By continuing to expand areas of organizational expertise through curricula, faculty, online education, and external partnerships, music units are clearly looking to discover new opportunities in their complex music industry environment.

Influential Arizona State University president Michael Crow proclaims that organizational identity is critical to this aspect of strategy: "our identity tell[s] us where we should focus our resources" (Bueller, 2015, p. 186). Music leaders highly attuned to the individual culture and identity of their organizations can leverage that awareness when determining whether to specialize or generalize. Since the participants in this study more often chose to generalize, strategic choice theory suggests that the identity of music units is indeed changing. Music leaders view their organizations as needing to encompass more breadth than ever before, leading to the observed expansion and generalization efforts (Child, 1972).

Resource dependance theory provides many expected outcomes for organizations in turbulent environments, but the "reliance on a single critical resource exchange" (Pfeffer & Salancik, 1978, p. 108) is considered a risky position for organizations. Higher music education, given its enrollment economy is particularly vulnerable in this respect (Aldrich, 1979; Miller, 1993). Reliant upon students for organizational function and enrollment for revenue, the music units of the 20th century were sustained by relative stability in demand for traditional music

education (Gandre, 2001; Miller, 1993; Myers, 2016). Because the digital revolution has disrupted that stability (Tschmuck, 2017), music units must engage in what resource dependance theory proclaims as "the more radical form of dependence avoidance through diversification into different lines of business" (Pfeffer & Salancik, 1978, p. 109). Through the great generalization, music units in this study displayed remarkable congruency to this aspect of resource dependance theory by engaging in multiple efforts to increase their "product lines" (Pfeffer & Salancik, 1978). Broadening audition policies, adding new online courses, co-curricular activities, and elective courses all suggest efforts to attract students that may not have formerly been "customers" of each individual music unit. As a group, these organizational behaviors may bring more people than ever into higher music education, almost certainly for the better.

The well-acknowledged goal ambiguity of academic organizations (Birnbaum, 1988) provides yet another perspective on the great generalization in higher music education. Birnbaum (1988) describes the cybernetic college as "unlikely to rationally calculate in advance the probable outcomes of the new activities it selects" (p. 187). In this explanation, music units are accruing activities in a haphazard way, with little direct coordination or strategy. Rather, the sheer kinetic energy of music faculty and administrators working in multiple directions simultaneously produces the observed expansion of almost every domain.

Cybernetics elucidates how a goal that seems clear during a planning phase may become diluted in execution (Birnbaum, 1988). Consider an attempt by a music unit to incorporate world music (non-Western) into a program: First, this music unit must decide if there ought to be an entire degree in world music or only a few elective courses. Cybernetics and the great generalization suggest that the music unit begins with elective offerings. If they add a new ensemble first, then perhaps this ensemble naturally begins performing in local venues that cater

to world music, forming new external relationships. Students who enjoy the ensemble begin to request further study and thus, world music becomes incorporated into improvisation courses and applied lessons. Students seeking to master non-Western instruments necessitate expert teachers and the music leader is now presented with the dilemma of hiring part-time faculty across a range of rare but important instruments (e.g., hammer dulcimer). Musicology courses begin to incorporate world music in an attempt to capture this popularity. Students begin to specifically audition utilizing world music in the hopes of gaining admission to a program with these opportunities. With the addition of new part-time faculty, the formerly world music ensemble becomes devoted to only one geographic region and multiple world music ensembles are created to represent diverse areas of the global music tradition. After a few years the music unit is faced with many choices: Should they create a new world music area or division? Should they eliminate their less popular opera program and specialize in world music? Should there be a degree offering? A graduate degree offering? Are the part-time faculty sufficiently broad to merit full-time appointment in subjects other than world music? Is there an opportunity for online instruction in world music?

Cybernetics explains how music units navigate these choices via self-correcting mechanisms (Ashby, 1956). Instead of requiring a master plan for world music in this case, simple demand for the subject governs the addition or contraction of world music representation across the music unit. The music leader would only need to engage if a major problem occurred. In this sense, the great generalization as a whole may be exceedingly consistent with many elements of cybernetic theory (Ashby, 1956). In an interesting refutation of this scenario, Sporn (1999) maintains that "in order to adapt universities need to develop clear mission statements and goals" (p. 269). Cybernetics illustrates how this is not necessarily the case. Music units in this

study may have a variety of competing, unclear, and potentially irrational goals, leading to generalization as a field and a wide variety of adaptive actions as individuals (Birnbaum, 1988).

Perhaps the most unexpected conclusion from this study was the reluctance of music units to employ organizational adaptation strategies of specialization. As the music industry has grown, globalized, and expanded in the past two decades (IFPI, 2019), music units could have focused on gaining market advantage in some of the new areas. The overwhelming global popularity of hip-hop does not seem to have caused many music units to shed their historical programs in favor of becoming hip-hop departments. The growth of digital and computer related careers (Smith & Telang, 2016) could have seen music units eliminate virtually all subjects except for music technology. Extraordinary growth in global video game markets, streaming video services, and online content (IFPI, 2019; Smith & Telang, 2016) could have provided an opportunity for music units to reinvent themselves as multi-media programs exclusively focused on music for media. With environmental niche opportunities available, why have music units engaged in so few behaviors consistent with specialization? The answer may reside in both the relative youth of the digital revolution and strong historical trends within higher education.

The digital revolution in the music industry is merely two decades old. This study has demonstrated that such a titanic environmental shift has indeed produced a major response from higher music education, however, these changes may represent an early-stage response. Although most music units are many decades or even centuries old, the digital revolution may have produced a "reset" in their organizational behavior. Cameron and Quinn's (1983) life cycles theory describes mature organizations as occupying a formalization or decentralization-centric stage of organizational development. These stages correspond to organizations' developing understanding and control of their environments. Cameron and Quinn's (1983) "entrepreneurial"

stage, the first stage of the organizational life cycle, more accurately describes music units in the post-digital era. They are experimenting with niche formation, innovation, and perhaps even identity. Returning to previous stages is in fact predicted by life cycles theory whereby "organizations may recycle through the sequence [of organization stages] again as a result of unusual environmental events" (Cameron, 1984, p. 127). Consistent with this concept, the digital revolution has caused music units to organizationally regress toward their earlier, entrepreneurial state. On a long enough timescale, music units may eventually return to an ordered progression through the life cycle stages where specialization and formalization may be the most prevalent organizational behaviors. If the music industry stabilizes, the music unit of the mid 21st century might resemble the music unit of the 20th century. However, with continual developments in technology, globalization, and musical art, stabilization in the music industry seems unlikely (Krueger, 2019; Smith & Telang, 2016; Tschmuck, 2017).

Forces outside of the music industry but ubiquitous in higher education may also play a role in the lack of specialized organizational response observed by this study. Shared governance and tenure both contribute to institutional reticence to specialize. Through its *de facto* protection of senior faculty, the tenure system makes specialization though the elimination of faculty a complex task for music leaders (Bok, 2013; Miller, 1993). A music unit looking to grow enrollment will therefore be more able to add faculty than eliminate them, leading to generalization. Shared governance, common across higher education (Hendrickson et al., 2013), also puts pressure on music leaders for consensus about their organizational direction. In a music unit with multiple competing interests this search for direction may ultimately fail, effectively leading to cybernetic practices (Birnbaum, 1988; Gmelch & Miskin, 2004).

Curricular expansion by the respondents in this study was rarely balanced by its opposite, curricular contraction. While two-thirds of music units did cut electives outside their degree plans, music units were reluctant to eliminate either part-time (72.9% "no") or full-time faculty outside traditional offerings (84.5% "no"). In cases where music units eliminated courses and not faculty there may be misalignment between vision, needs, and resources (Bastedo et al., 2016; Bueller, 2015). The association between elimination of part-time faculty outside of traditional specialties and higher EP scores does illuminate an interesting truth about specialization: Music units may regard part-time faculty as a domain in which specialization can be accomplished without major alterations to full-time faculty, tenure, hiring, or core instructional priorities (Bok, 2013; Miller, 1993). The influence of accreditation in music may require further investigation in this regard. With so many demands on contemporary musical training (Butt, 2018), NASM grants institutions wide latitude in determining what can be included in music credentials (NASM, 2020). Unfortunately, from the perspective of specialization, NASM does require that many competencies be met regardless of what degrees a music unit includes. Therefore, accreditation in music may in fact be a bulwark against specialization as no music unit could completely reorganize its core functions without failing to meet NASM standards for music degrees (NASM, 1999; 2020).

The theories of organizational adaptation provide significant insight on the main finding of this study, the great generalization in higher music education. Music units' behavior aligns with several tenants of multiple theories while also presenting the intriguing reality of a discipline reluctant to engage in nearly any specialization. Major structural alterations as prescribed in contingency theory (Lawerence & Lorsch, 1967) and network organization theory (Powell, 1990) were intermittently observed but ultimately linked to generalization.

The Influence of Environmental Perception

Environmental perception for the entire sample was modest. Music units displayed a measurable level of environmental perception whereby scores roughly corresponded to a normal distribution. The important aspect of this result then, is the observed relationships between the various composite scores and potential implications about the nature of environmental perception in higher music education. In organizational adaptation theory, "the important point is not merely that measurement affects behavior, but what gets measured focuses activity and behavior" (Pfeffer & Salancik, 1978, p. 76). This study found conclusively that higher levels of environmental perception were correlated with average generalization and total adaptive action, as well as a range of individual organizational adaptation strategies, decentralization, generalization, and formalization.

The finding that organizational adaptation in the form of actions employed is correlated with environmental perception confirms a major aspect of organizational adaptation theory (Aldrich, 1979; Daft & Weick; 1984; Khandwalla, 1977): Music units as single discipline academic organizations employ more adaptive actions the greater their awareness of their environment. Although this finding has been previously explored for entire academic institutions such as colleges and universities, this study represents a significant measurement of organizational behavior on a discipline-level that remains consistent with organizational adaptation theory. Despite the many aspects of higher education that obfuscate planning, goal setting, and organizational change (Bok, 2013; Bueller, 2015; Sporn, 1999), small (almost entirely embedded, in this case) academic units are responding to environmental change in a manner consistent with theories developed for larger-scale settings. As a compliment and partial response to Sporn's (1999) assertion that organizational adaptation should be studied on the

department or discipline level, this study provides evidence that such adaptation does occur, and the importance of environmental perception is directly related to organizational behavior.

Given the observed great generalization, a correlation between higher environmental perception capabilities and music units adopting generalization strategies is logical and evident in the data ($r = .52$, $p < .01$). This generalization tendency is further reflected in the OAS score correlation ($r = .26$, $p < .05$). The direction of this correlation indicates the decentralization/generalization side of the organizational adaptation typology spectrum, and the (low) magnitude reflects both lower total OAS scale scores and a lower association between the highest EP scores and highest OAS scores. A larger (positive) magnitude would be more indicative of decentralization as a dominant strategy in this case.

The natural question stemming from the major variable correlations is why EP scores were also correlated with organizational adaptation strategies of decentralization and formalization. Explaining this behavior partially draws upon the very nature of uncertainty in turbulent environments. Efforts at decentralization align with the response predicted by contingency theory (Lawrence & Lorsch, 1967). In the aforementioned example of world music, contingency theory would posit that the music unit create a world music department, perhaps consisting of multiple programs or specialties, as the best way to reflect environmental demand for world music instruction. Clearly in some cases, music units with higher environmental perception scores did adopt such an approach across various domains. A potential symbolic action solution might see a music leader re-brand the music unit with a world-music mission, transfer world music instruction online to reach more students, and promote part-time world music faculty to full-time positions (Manning, 2018; Pfeffer, 1981). These types of actions were also adopted in many cases by music units with high environmental perception capabilities.

Khandwalla (1977) maintains that "the more turbulent the external environment, and the more technologically sophisticated the external environment, the more innovation-supportive is the top management philosophy" (p. 564). This elucidates not only the wide range of organizational behavior measured by this study, but the correlations between environmental perception and organizational adaptation strategies of decentralization, generalization, and formalization. The greater a music unit's environmental perception, the more likely they were to engage in actions across each of these strategies with the strongest association being organizational adaptation strategies of generalization. Furthermore, music leaders in this study displayed wide agreement on the relative turbulence of their own environment. The inevitable conclusion therefore is that music leaders are clearly experimenting in almost every domain, searching for innovations that enable their music unit to adapt to the turbulent music industry environment.

The "Janusian" effect, hypothesized by Cameron (1984), was not directly observed in this study. However, the associations between higher EP scores and both decentralization and formalization hint that some manner of this effect may exist. Supporting this is the correlation between decentralization and formalization organizational adaptation strategies ($r = .53$, $p < .01$). In Cameron's (1984) "post-industrial environment" where "the adaptability needed by institutions will require 'Janusian' characteristics be present" (p. 140), music units are clearly hinting at such behavior – looking to centralize control in some domains while simultaneously creating new structural elements of their organizations. Perhaps organizational stage is again a factor. In reference to the life cycles theory, the great generalization may be followed by a purer coalescing of the "Janusian" effect (Cameron & Quinn, 1983) as higher music education continues to evolve.

Isomorphic trends, common across higher education, may also be contributing to the organizational behaviors measured in this study (DiMaggio & Powell, 1983; Thelin, 2013). Higher music education has a long tradition of professionalization that increases the likelihood of isomorphism (DiMaggio & Powell, 1983; NASM, 1999). In this study, participants did indicate that learning from other music units was not unique in their EP scale responses. Rather, peer music units were rated similarly to learning from outside music industry experts and current students. This reveals that although isomorphism is surely present in higher music education, it may not stand out from other areas of environmental perception and as such, may not explain significant amounts of organizational behavior. An entire field of music units working to adapt to the digital music industry may, through convergence, produce similar results, but this study concludes that pure isomorphism is merely a contributing, not driving, factor in this regard. Because the stand-out result from the EP scale was the concurrence on how quickly the higher music education is changing, music units demonstrated they are more sensitive to their environment than to other music units. If, in the world music example, multiple music units adopt competing world music programs, it is more likely that both units sense environmental demand for world music more strongly than they seek to directly "keep up" with each other. In fact, it could be argued that music units more attuned to their own inherent competition would seek to specialize more than generalize, as that would help corner greater market share with respect to the entire population of music units (Aldrich, 1979). That this was not the case further signifies higher music education's new, generalizing, experimental, and entrepreneurial phase where the music industry, not internal competition, is the preeminent influential force.

Organizational adaptation strategies of inaction in this study as measured by the inaction composite score highlight an interesting feature of the results: Some music units are hardly

changing at all. These music units are those that have lower environmental perception scores as indicated by the strong negative correlation between EP and inaction (r = -.58, p < .01). It could be that Cameron's (1984) concept of "reactor organizations" holds true in the case of higher music education. Since the digital revolution is quite young and has been unpredictable, especially regarding new technology and music industry business models (Tschmuck, 2017), some music units may be hesitant to employ major organizational change. In so doing, they may be looking to other music units or waiting for the music industry to stabilize before utilizing some of the actions described in this study. Evidence would suggest however, that inaction is not wise.

The music industry holds no signs of stabilizing (Krueger, 2019). Economists indicate that the digital revolution will continue to reverberate in second and third waves over the coming decades (Smith & Telang, 2016) putting further pressure on higher music education to remain current and relevant (Butt, 2018; Cloonan & Willianson, 2018). Corresponding to Cameron and Quinn's (1983) life cycles theory, music units currently engaged in experimentation and generalization will ultimately be able to redefine their market niches and eventually, consolidate those positions. Organizations that remain hesitant to act will not have this luxury (Cameron, 1984). The history of higher music education is littered with closures, mergers, and organizational failures (Gandre, 2001). As Gandre (2001) specifically points out, those failures often were a result of low environmental perception on the part of music units. This study directly measured the link between low environmental perception and high levels of inaction, not only confirming the risk of potential failure, but also directly confirming that Gandre's (2001) conclusion holds contemporary relevance.

In a few cases, results from the inter-item EP scale correlations highlight potentially important aspects of environmental perception for higher music education. Most crucially, the role of philanthropy and additional revenue sources was shown to have small but potentially important relationships to awareness of the music industry and curricular alignment. The more music units provided opportunities to learn about the music industry, the more likely they were to report successful efforts at attracting philanthropic revenue and funding beyond tuition. This relationship similarly held true for those music units reporting high levels of curricular alignment with the music industry; if a music unit rated its programs as corresponding to the music industry, they also reported higher abilities to attract outside revenue. In the context of this study, these correlations were relatively low, however, in the "enrollment economy" of higher music education they might hold major significance (Aldrich, 1979). Music leaders looking to build philanthropic relationships should consider how well they reflect the music industry through exposure to learning opportunities and curricula. Furthermore, music units scoring high on the inaction composite scale were less likely to rate highly on fundraising success. The implication here is music units' attempts at adapting to the music industry may directly include fundraising operations to support their efforts and those music units doing very little to adapt are consequently bringing in fewer outside dollars.

Differences by Institutional and Music Leader Characteristics

Analyses of the differences between groups of music units across the entirety of this study observed a remarkable homogeneity in higher music education. Surprisingly, music leaders' background and geographical location had little effect on music units' behavior. This is a promising result from the perspective of higher music education. Music units are not "prisoners" of their location and perhaps one of the greatest side-effects of the digital revolution

in the music industry is liberating artists and music organizations from a reliance on the few cities in which major recording companies have prominent headquarters. This may in fact be a paradigm shift of its own. As Gandre (2001) describes the intimate relationship between the New England Conservatory and the Boston Symphony in the 20th century, music units outside of Boston lacked such access to the preeminent orchestra of their region. In the post-digital age, music units anywhere on the globe can equally participate in cultural creation on both the local and global scale (Kertz-Welzel, 2018). This may explain why music units behaved similarly across geographic locale.

The normative effects of academic leadership may be responsible for the observed similarities between music leaders of different backgrounds. However, this is a difficult conclusion to verify owing to the very small representation of music leaders outside of classical or music education backgrounds. The fact that music leaders skew so heavily toward these older and traditional specialties is evidence that the digital revolution has not yet fully impacted the academy. Terminal degrees in new fields are academically younger and rarer than established fields such as classical music performance (HEADS, 2019). Disciplines such as music industry studies may not yet have produced enough academics to ascend to the rank of music leader in large proportions. Even if the proportions were more evenly split, the demands and confines of academic leadership may still have produced similar responses across all music leaders (Bueller, 2015; DiMaggio & Powell, 1983). Sorensen's (2007) work does suggest that the lived experiences of music leaders matter a great deal, but those experiences are effectively balanced by the shared experiences and challenges of academic leadership. The critical characteristic of music leaders in this study was not background, but rather, position. Those music leaders in higher-ranking positions indicated greater adaptive efforts than those music leaders in a

department chair/head role. Although these differences were small, they may reflect the influence of strategic choice theory in the relative power of higher-ranking music leaders (Child, 1972).

Observed differences between groups in this study are connected by a common theme: complexity. Music units granting graduate degrees were engaged in strikingly more adaptive actions than music units granting only undergraduate degrees. Furthermore, masters and doctoral-granting music units were more heavily engaged in generalization and decentralization than their undergraduate-granting counterparts. Graduate study adds layers of complexity to any institution of higher learning (Bok, 2013) and music units where graduate credentials are awarded were clearly making major changes. Another explanation for this observation could be that some of the organizational adaptation is occurring exclusively at the graduate level. Although in this study, only curriculum would be so neatly contained, the specific response of graduate programs in higher music education to the digital revolution presents an intriguing area for continued research. Size is often a proxy for institutional complexity in higher education and in this study, differences by size were very clear. Larger music units employed more adaptation techniques in all domains when compared with smaller music units. Interestingly, correlative relationships were similar suggesting that adaptation is proportional and perhaps linearly, rather than exponentially, related to music unit size. Taken together, the definitive feature of music units with greater responses to their turbulent environment is the complexity of the music units themselves. The larger the unit, the higher level of study offered, the more pronounced response.

Towards a Theory of Organizational Adaptation at the Discipline Level

One critical concept within the underlying background for this study was the relative scarcity of organizational adaptation research in higher education at the discipline or

departmental level (Sporn, 1999). The results of this study illustrate the potential for advancing elements of organizational adaptation theory as it applies to academic disciplines in turbulent environments. In the case of higher music education, six postulates can be deduced from this study's major findings and applied to higher education more broadly at the single-discipline level:

1) *The better a unit perceives its environment, the more organizational change it will employ.* This is consistent with organizational adaptation theory and broadly mirrors behavior observed at larger-scale levels of analysis.
2) *Units within the same field will trend most heavily toward organizational adaptation strategies of generalization.* This is due to the need to explore and define new environmental niches while maintaining core function and resource efficiency.
3) *The more turbulent the environment, the broader range of strategies in addition to generalization it will employ*. This is due to the pressure to innovate across multiple domains.
4) *Centrality of function determines strategy: Units will utilize greater levels of decentralization and formalization in mission-critical activities while fringe activities will generalize*. This is due to higher education's unavoidable dependencies on enrollment, funding, and immutable connections to similar core missions.
5) *Higher education traditions matter: Rarely will organizational adaptation strategies of specialization be employed.* This is due to the constraints on higher education such as tenure, shared governance, and accreditation.

6) *Complexity matters: More complex units engage in greater levels of adaptation.* This is due to the greater number of avenues for adaptation present in larger, more complex organizations, especially those units where graduate study is offered.

These postulates have been directly observed in higher music education, however, an important question for consideration is: Do music units operate in unique circumstances that influence adaptation differently from other disciplines? Organizational adaptation theory and results from this study suggest that in fact, it is not the discipline that is the critical factor (Aldrich, 1979; Cameron, 1984; Sporn 1999). The turbulence of the environment is the critical factor in this case (Daft & Weick, 1984). The digital revolution first occurred in the music industry owing to the high levels of quality initially achieved in digital recording, audio compression, and digital distribution (Fisher, 2004). With subsequent advances in technology, this digital revolution has now occurred in a similar fashion across the entire cultural industry sector: film, books, television, podcasts, and social media (Smith & Telang, 2016). For this study, higher music education allowed an examination of how music, an early area of the digital revolution, has changed, but similar studies could now be conducted across other culturally related disciplines in higher education as they too are operating in the same turbulent environment familiar to music leaders. This study implies that as more disciplines experience the results of technological, economic, or societal change, they too will be operating in turbulent environments and thus, will exhibit the types of adaptation this study has observed. Are the cultural industries unique in this respect? Will other areas of the academy experience a great generalization in the near future?

An unrelated and well-studied area of higher education's history may be instructive in understanding the future of turbulent environments in academia. The second world war and its

aftermath created an unprecedented turbulent environment for scientific research in higher education. The nature of new organizational collaborations between higher education, the military, and the government led directly to scores of inventions, patents, and expansions of federal funding for scientific research across the higher education sector (Thelin, 2011; Young et al., 1983). The success of these wartime efforts led to the creation of the National Science Foundation and "the program and policy structures that would define large-scale academic scientific research for decades to come" (Thelin, 2011, p. 272). In the context of new federal agencies, competitive research grant funding, and major public investment, historian John Thelin (2011) echoes the very premise of this study when he asks "how did universities respond to the new external environment?" (p. 272). The answer reflects themes consistent with this study's results for music.

Sciences in higher education experienced extraordinary generalization and decentralization during the immediate post-war era developing new disciplines that mandated new departments, faculty, and instructional programs. Thelin (2011) specifically discusses the generalization and growth occurring at university medical schools as a direct response to the new external research environment. Eventually, the scientific activities based on this new environment solidified into the common structures at many colleges and universities today and "it [is] impossible for any university to maintain a leadership record in [the sciences] without federal research funding" (Thelin, 2011, p. 274). Despite continual advances in many fields such as physics or engineering, the governmental funding system has remained intact and the external environments for the scientific fields are relatively stable (Owen-Smith, 2018). Stability, however, may be short-lived as some scholars predict a renewed turbulent environment on the horizon due to advances in artificial intelligence, quantum computing, and genetic technology

(Alexander, 2020; Owen-Smith, 2018). Therefore, the turbulent environment in the cultural industries that has led to this great generalization in the music discipline may in fact be part of a recurring historical pattern in higher education, one that will undoubtably continue as the 21st century progresses.

Limitations

One of the biggest limitations in this study was the small sample size. Although this is common in the social sciences (Rea & Parker, 2005), in this case, higher music education is also limited by small total population size (NASM, 1999). Particularly critical for music was the uneven representation of music units across many of the demographic groups of interest, especially geography and free/embedded status. The small sample size and even smaller sub-group size made several comparisons impossible and thus, research question four considering the differences in organizational adaptation by institutional and leader characteristics remains partially unanswered.

From the perspective of previous organizational research, the lack of clear outcome variables is a major limitation of this study. Although higher education is well-acknowledged for its multiple and competing goals (Bok, 2013; Manning, 2018), a variation of this study could have attempted to link organizational adaptation strategy to major educational metrics such as enrollment, fundraising, or graduation rates. As with prior organizational research, the correlations and relationships reveled by this study do not necessarily indicate causality (Khandwalla, 1977) and thus, explanatory power for organizational adaptation strategy is inexact. Follow-up research could use more complex mathematical modeling to deduce such cause and effect, but as Khandwalla (1977) illustrates, this is a difficult prospect in the organizational studies field.

A basic limitation for this study was the low response rate (18.4%). Combined with the small total population size, all statistical analyses were conducted using smaller samples than would be ideal in educational study. Limiting the scope of the study to only U.S. institutions also omitted a large number of potential survey respondents in the U.K., Europe, and Canada that share similar musical and academic histories, and thus, may share similar current challenges (Butt, 2018; Gandre, 2001; Miller, 1993). This highlights a natural direction for further research. Another significant limitation of this study was the number of survey items and domains represented on the survey instrument. In the context of higher music education, an innumerable number of potential actions could theoretically be employed by music units. Reducing such an infinite number to 40 survey items in only 10 domains represents a dramatic simplification of academic organizational behavior. This was a requirement to conduct quantitative research, however, it illustrates potential for qualitative research to illuminate the nuances of music units' behavior beyond this survey. Finally, this study focused on organizational behavior and did not collect further detail on any individual domain of music units' actions. For example, music units are adding courses in new subject areas, but *which* subjects? This level of detail in each domain was not present in this study but presents an important avenue for continued scholarship.

Finally, because the unit of analysis for the study was the music units but the population surveyed was music leaders, a natural limitation of the study was ability of the music leaders to provide accurate information in a survey format. Furthermore, as some branches of organizational theory incorporate all members of the organization (Manning, 2018), an important limitation of this study was the lack of perspectives from other members of music units such as faculty and students.

Analysis of the Organizational Adaptation Typology Spectrum

As a coda to this discussion and related to this study's limitations, a brief analysis of the organizational adaptation typology spectrum is appropriate. Organizational research using quantitative methods is reductionist by nature (Khandwall, 1977) and extracting narrow elements from such a wealth of theoretical constructs forces a condensed approach to highly complex concepts. However, the categories of organizational behavior represented on the organizational adaptation typology spectrum are not exclusive. By allowing for overlapping individual behaviors to produce a composite organizational adaptation trend, the spectrum is useful for examining populations of organizations (Aldrich, 1979). From this perspective, there are two major utilizations of the spectrum: 1) examining the mixture of organizational behaviors; and 2) identification of population-level trends. In this respect the organizational adaptation typology spectrum has been successful for higher music education in that it allotted for the mapping of many actions onto the various strategies to produce a portrait of behavioral ratios (expansion) and broader composite trends (generalization). Examining environmental perception allowed for the composite trend and each individual organizational adaptation strategy to be compared, but importantly, the environmental perception concept was extracted from the very same theories that produced the organizational adaptation typology spectrum. This type of "closed use" of the spectrum functioned well for this study but the organizational adaptation typology spectrum could be applied far more broadly. Most appropriately to higher education, the spectrum can function as a conceptual guide to help ensure that adaptive actions are intentional and mutually supportive. By examining their plans across various domains, academic leaders can evaluate the potential for conflicting interests, goals, or resources. Finally, although no measures of organizational performance were included in this study, the organizational adaptation typology

spectrum can be used as framework for assessing multiple outcome variables. Those in higher education should be considerate of the implications of any one metric for organizational success (Bueller, 2015), but the spectrum can be used to better understand *how* an academic organization chooses to pursue its goals.

Recommendations for Future Research

This study presents a foundational work that can provide background for many areas of further research. These areas are grouped into three categories: 1) higher music education; 2) higher education adaptation; and 3) implications of the digital revolution for higher education.

Higher Music Education

Similar to case study work by Hilbun (2013) and Birnbaum (1988), higher music education should be studied in a qualitative manner with a focus on how music units are dealing with the great generalization observed in this study. The insights into academic decision-making and responses to the music industry would be top research questions in this work. Additionally, diversity and inclusion in higher music education can be explored from both a market and music industry perspective. Further survey research should be conducted explicitly along the lines of curricular expansion. The addition of music industry courses, recommended by so many scholars, would be a major focus of such work. A direct repetition of this study could be conducted in international music units, with a comparative focus. The differences in origin and social function of higher music education in the Europe and the U.K. would provide a fascinating point of comparison to this study. Understanding if the great generalization is truly global may have far-reaching effects, especially in the realms of competition and online education.

Each low inter-item correlation in this study opens a door to potential further research. The intriguing relationship between music industry curricula and philanthropy should be studied

to understand how donors respond to the promise of vocational music programs. Inaction in general ought to be studied in higher music education; If the music industry is causing music units to change, why are some barely changing at all? External partnership strategies of decentralization, generalization, and formalization all were correlated with higher EP scores and represent a fecund area for further research. How are music units functioning in relationship to their external partnerships in their home regions? This question could be explored through the developing concept of music ecosystems and intersect with research about the music industry and cultural arts policy in local and state environments (Seman, 2015; Titon, 2009). From the perspective of diversity, equity, and inclusion, music unit audition and admissions policies should be studied explicitly with regard to access. The attitudes of faculty and administrators toward broader inclusion of non-classical genres should be the focus of such a study. Overall, higher music education has become a developed research area and this study illustrates many possible directions for continued research.

Higher Education Adaptation

From the perspective of higher education, this study provides a blueprint for future work in the area of adaptation. This study, in particular the use of the organizational adaptation typology spectrum, should be reused in relationship to outcome variables common in higher education. Whether an overall strategy of generalization leads to enrollment increases would be a valuable to academic leaders. In particular, variations of this study should be used for types of academic organizations facing similarly turbulent environments to the music industry. Community colleges and two-year institutions have seen many recent financial challenges (Alexander, 2020) and would be an important organization set to evaluate using the methods in this study. Similar to work by Hilbun (2013) and Birnbaum (1988), liberal arts colleges faced

with demographic changes and rising tuition costs may also prove an interesting group of organizations to study using this method. As previously stated, other academic disciplines in the cultural industries, such as art and theater, would make ideal subjects for related adaptation research. This could be contrasted with studies of less turbulent areas as a control group to evaluate the true impact of turbulent environments on academic disciplines.

Another intriguing approach for future research using the organizational adaptation typology spectrum would be the comparison of all departments within a single, large institution. The variations displayed by each department could revel insights on organizational behavior across loosely-coupled systems and provide a unique perspective on academic leadership. Such a study would be a fascinating contribution to the conceptualization of an institution as an ecosystem of interdependent organizations (Manning, 2018).

Further investigation of Cameron's (1984) "Janusian" effect in academic organizations is also warranted. Because music units did increase their employment of decentralization and formalization actions as perception of their turbulent environment increased, the important question would be to better understand the nature of the relationship between decentralization and formalization in academic organizations. This could take the form of further survey research, but a case study approach as utilized by Sporn (1999), Gandre (2001), Birnbaum (1988), and Hilbun (2013) could potentially investigate how academic leaders navigate the choice between building out new organizational structure and consolidating or centralizing control over various operations.

Implications of the Digital Revolution for Higher Education

A major, and perhaps urgent question for higher education practitioners and scholars is how the digital revolution in music, media, and entertainment will impact higher education. In

the music business, the collapse of the necessity of physical distribution led to 15 years of declining revenue from physical sales and a recording industry dominated by technology companies (Tschmuck, 2017). In higher education, we may see a similar result: a cross-sector reorganization to accommodate the digital distribution of educational products to a growing and diverse audience of students. Technology companies are ready and eager to move into the higher education space, potentially bypassing traditional accreditation and degrees in favor of job-training, certificates, and low-cost options for students (Alexander, 2020). The digital delivery of courses, influence of artificial intelligence in teaching and learning, open access sharing of research, intellectual property issues, and students' digital privacy rights represent only a sampling of potential avenues for future scholarship. Similar to the music industry (Norgård, 2018), research should focus on the growing influence of technology companies in the higher education sector and both merits (access) and drawbacks (control) of such relationships. Administrators, board members, and scholars in higher education would be wise to look at the music industry as a cautionary tale. The benefits to culture and innovation have produced a dynamic new age, but at what cost? Economic models are still uncertain, new market players have tremendous power, technology has outrun the legal framework for copyright, and the music industry has become more unequal (Krueger, 2019). If the digital revolution in higher education can produce the collective benefits of access without the individual concessions to inequality, higher education will have achieved something poetic indeed, perhaps inching closer to the very best version of its social mission (Bok, 2013).

Recommendations for Practice

Several sets of recommendations for practice emerge from the results of this study. These recommendations are organized into three major areas: techniques to improve music industry

awareness, navigating digital and local expansion, and adopting a "strategic generalization" stance.

Music Industry Awareness

Clearly, music units should engage in activities that increase their knowledge of the music industry. Through this knowledge, they increase their chances of employing successful adaptation. Failing to experiment with adaptive actions could easily result in music units finding it more difficult to compete for resources, prestige, and students. In this study, survey items specified forums for faculty to learn about the music industry via exposure to music industry experts, other music units, and current students. Exposure in this way can take a large variety of forms. Music administrators should consider a proactive approach whereby music industry experts in their local area are invited into the music unit to present on current music industry issues and build relationships with faculty and students. Networking experiences of this type can naturally lead to collaborations, projects, guest artists, and internships. Importantly, music industry experts whose work is distant from traditional fields of study in higher music education (e.g., film music supervisor) would make for excellent guests. Similar to common practice at business schools and medical schools, a music industry "advisory board" could be composed of high-level music industry talent and work to advise the music leader and faculty on broad trends and curricular development. As the music industry continues to rapidly evolve, such an advisory board would be a major asset to assist the music unit in distinguishing major trends from "fads" within the economic and artistic landscape of music.

Scholars such as Kelman and Cashman (2019) illustrate the fact that students often are "ahead" of their faculty on music industry issues. Music administrators should make every effort to use the exceptional knowledge base their students provide. This is especially true in areas

where marketing and promotion trends specifically target younger consumers such as social media and video games. Forward-thinking music leaders should engage their students in curricular decisions and bring them to educate the *faculty* on how various digital promotional techniques apply to music.

Music units have many established forums for learning about the music industry from their peer organizations including conferences, professional societies, and NASM. However, these groups could play a stronger role in the environmental perception of music units. Simply put, the relationships between higher music education professional organizations and music industry professional organizations such as the Recording Academy, should be strengthened. Particularly to address the issue of access and social capital in successful music careers, stronger interplay between music industry professionals and higher music education must be encouraged on the field-level. Individual music units should be able to receive direct assistance from these professional organizations in building and maintaining music industry relationships. In this way, the idiosyncratic disparities between music units may be less of a handicap for those music units interested in increasing their interactions with the music industry.

Digital Versus Local

A second and critical recommendation concerns external partnerships (local) and online education (digital). As exhibited in this study, music units utilize external partnerships across many adaptation strategies and should be encouraged to continue developing relationships within their local communities. A strong majority of music leaders clearly incorporate such partnerships into their formulae for success. Music leaders looking to extend or create partnerships should begin with the essence of music: live performance. Every café, library, rock club, and performing arts center in a music unit's region is an opportunity for exciting external partnerships. Once a

music unit has achieved some representation in local venues, it should look beyond the performance into areas of collaboration that can include production, promotion, booking, and direct curricular engagement via internships. Music leaders should seek to partner with entertainment organizations in their area such as film/tv production groups, music equipment stores, and cultural non-profits. Deepening community engagement in this way facilitates more successful recruiting efforts and assists with increasing music industry awareness on a local scale. Creative music units can partner across sectors with corporations (advertising music), foundations (educational activities), and local governments (cultural policy service) to grow and contribute to their local music ecosystems.

External partnerships can also be academic in nature. Music units located within research universities should partner with STEM disciplines for curricular and research collaborations in contemporary music industry fields; data science, audio technology, and computer programming are potential examples. Stand-alone music units can seek partnerships with non-music institutions for similar crossover work or integrate other areas of the arts by partnering with film production programs, dance academies, and art schools. Overall, music leaders should diligently increase their unit's "footprint" by growing relationships at all levels to the benefit of their faculty and students.

Online education is a suitable avenue for expansion for those music units with large resources, infrastructure, or reputation, however, music units should take care when beginning new online ventures as the market is increasingly crowded and globalized. In a growing and populous digital environment, a music unit must ask not "if" it should create programming online, but "what" it can create that differentiates that music unit in the marketplace. Music units with particular expertise should seek to digitize in those areas. The use of guest instructors,

flexible scheduling, and modular offerings can provide more tools for music units to engage their target students. In light of the declining numbers of traditional college-age students (Grawe, 2018), music units should seek to engage the vast numbers of armatures and hobbyists to increase total enrollment. Serving working professional musicians, especially in career development education, could also be a valuable area of online expansion for music units. Furthermore, as the music industry continues to globalize, music units should incorporate multiple genres of music and international business perspectives into their online programming.

Music units without a strong online presence should seek to create content that does not duplicate other offerings. Higher music education in the modern era is such a vast field that just about any unique subject matter will find an audience. However, music leaders should also be wary of expending large amounts of capital on niche programming. If a music unit intends to invest in online programming, it should be highly intentional with well-defined goals.

"Strategic Generalization"

The final recommendation for music leaders is cautionary and derives from multiple organizational adaptation theories (Aldrich, 1979; Cameron & Quinn, 1983): Ensure that efforts to generalize and decentralize do not inadvertently lead to expansion in all areas. Such expansion may be unsustainable and may lead to mission creep and loss of identity. Instead, music leaders should consider a "strategic generalization" stance, where broad experimentation leads to the discovery of new market niches that then receive substantial targeted institutional support. In a "strategic generalization" approach, music leaders experiment in multiple directions, but are quick to recognize where success can be found. Once an area of their activities acquires traction, music units should cease experimentation and build upon those successes. In the running example of world music, if the music unit's first few world music courses and events were

highly popular, a strategy of "strategic generalization" would rapidly expand world music and gradually phase out other concurrent expansion efforts. However, if world music programming was only modestly popular when compared to another new effort in music technology, "strategic generalization" would not invest any additional resources in world music in favor of expanding music technology. This is not to suggest a purely market-based approach. Rather, music units can strategically define their core identity and look to many of the new music industry areas for direction. For the successful 21st century music unit, all domains of activity should be open to experimentation. Although traditionalists in higher music education may refute the idea that not every music unit needs an orchestra, some music units should strategically work to become better at offering symphony programs while others should follow more contemporary trends, phasing out their orchestras in favor of musical theater or hip-hop. "Strategic generalization" is not only curricular in nature. Such a strategy should be pursued with regard to external relationships, online offerings, and faculty hiring. This study suggests that the music unit of the future needs to be more of an organizational generalist than the music unit of the past. However, for each new area of expansion, music units must take advantage of the expanding industry to develop new identities and new markets without fear of eliminating traditional areas and functions.

Finally, a strategy of "strategic generalization" demands that music units pay equal attention to trends in higher education that have the potential to impact this field-wide expansion. Music units, as shown by this study, are paying close attention to the dynamic music industry, driving the great generalization. Macro trends in higher education such as demographics, online competition, inequality, cost, and globalization all could act as moderating forces on music unit enrollment and performance in the decades to come. Music units looking to continue successful

adaptation should take care that any efforts to accommodate emerging music industry trends are accompanied by a rigorous understanding of parallel higher education issues. Organizational adaptation theories (e.g., Cameron 1984) suggest that the sooner music units arrive at new market areas through the great generalization, the more quickly they will be able to stay ahead of the higher education landscape and the more likely their success will be in the digital music era.

Chapter Summary

This chapter presented a discussion of the major findings in this study. Higher music education is in the midst of a great generalization. Music units are predominantly expanding in almost every domain with potentially promising results in curriculum, access, and external engagement. This expansion was contextualized in relationship to the discipline of music and higher education's broader history of growth. Environmental perception was found to be an important influence on organizational adaptation in this study, an area of congruence with the major theories used for the theoretical framework. Suggestions for future research were presented in three areas; higher music education, higher education adaptation, and implications of the digital revolution in higher education. Limitations of the study were discussed and recommendations for practice were presented with a focus on how music leaders manage continual expansion.

Gandre's (2001) research demonstrated that higher music education is resilient. This study concludes that the outlook for higher music education in the 21st century is strong, but only if the measured organizational adaptation continues to evolve. Music leaders should recognize that they collectively occupy an early stage of the digital revolution. The music leaders of the next generation will need to understand their music industry environment and adopt different kinds of strategies in order to keep their organizations successful.

Adapting to the new music industry may hold continual challenges for higher music education, but musicians by nature are an adaptable species. They even write songs about it. In the words of David Bowie (1972), “Turn, and face the strange”.

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Appendix I

IRB Protocol.

UNIVERSITY OF ARKANSAS

To:	Jacob B Hertzog BELL 4188
From:	Douglas J Adams, Chair IRB Expedited Review
Date:	01/29/2021
Action:	**Exemption Granted**
Action Date:	01/29/2021
Protocol #:	2101307319
Study Title:	Times They Are a-Changin Investigating Organizational Adaptation in Higher Music Education

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or irb@uark.edu.

cc: Ketevan Mamiseishvili, Investigator

Appendix II

The data from the Higher Education Arts Data Services (HEADS) cited in this study was obtained through permission from my department chair, Dr. Ronda Mains, at the University of Arkansas. This data is collected annually from National Association of Schools of Music member institutions and published in March of each year. It can be accessed for a fee by researchers. Generic annual reports are available and for additional fees, the organization will compile custom data for specific institutional use. Knowing that this would be the most recent data released before the beginning of my dissertation enrollment in summer 2020, I wrote to Nora Hamme, the research associate, shortly after the publication, to inquire if I could access the data for no fee if the purpose was dissertation related research. I was told that I could request access from my department chair as I was currently a faculty member at an accredited institution. Permission was obtained and I was able to access generic reports from 2004 to 2019.

My email exchanges to obtain permission to access these reports are below, edited only to remove email signatures.

> Dear Jacob:
>
> Thank you for your interest in the HEADS Data Summaries. Professor Mains has given permission for you to have access to those summaries, so I have created an account for you to access them.
>
> Username: jhertzog
> Password: XXXXXX
>
> You may access the summaries at the link below:
>
> XXXXXX
>
> Please let me know if you have any further questions.
>
> Best,
> Nora

--
Nora Hamme

From: "Jacob B. Hertzog" <jhertzog@uark.edu>
Date: Monday, April 13, 2020 at 12:19 PM
To: Ronda Mains <XXXX>
Cc: Nora Hamme <XXXX>
Subject: Re: Jake Hertzog

Hello Dr. Mains,

Thank you very much for your assistance here!

Nora, thank you as well, and if there is anything you need from me, just let me know.

Take good care,

Jake Hertzog

On Apr 13, 2020, at 9:58 AM, Ronda M. Mains <XXXX> wrote:
Dear Nora,

I will certainly miss seeing you this spring. I hope that you are well and safe!

Could you give Jacob Hertzog access to the HEADS data surveys.

Best,

Ronda Mains

Appendix III

This appendix provides a partial list of search terms utilized to collect the research for this study. These terms were used in three primary locations: Google Scholar, the University of Arkansas Library embedded search tools, Open Access Tools, such as JStor, Amazon.com for used and new monographs, Interlibrary loans, and generic web search engines (Google, Bing). Many sources were located by consulting the reference lists of other authors.

A list of the most frequently used terms is as follows:

For Organizational Adaptation:
Organizational Adaptation
Higher education adaptation
Higher education organizational adaptation
Population ecology + or – "adaptation" and "organizational"
Contingency theory + or – "adaptation" and "organizational"
Life cycles theory + or – "adaptation" and "organizational"
Network adaptation theory
Organizational adaptation theories
Strategic choice + or – "adaptation" and "organizational"
Symbolic action + or – "adaptation" and "organizational"
Isomorphism + or – "adaptation" and "organizational"
Cybernetics theory + or – "adaptation" and "organizational"
Organization higher education
Organizational improvisation
Organizational change + or – "adaptation" and "organizational"
Higher education organization change

For Music Industry and Higher Music Education
Music industry disruption
Music industry change
Digital revolution + or – music industry
Music business change
Digital music economy
Music business history
Music industry history
Music streaming
Record labels
Music publishing
Live music sector + or – music industry
Higher education music programs
Higher education music

“higher music education”
Higher education music faculty
Higher education music curriculum
Diversity in higher education music programs
Music industry + - globalization
Music entrepreneurship college
Higher education music entrepreneurship
Higher education music + - facilities, leadership, governance
Student record labels
Hip hop + - higher education, + - college
Popular music in higher education
Music curriculum reform
Auditions in higher education music programs
Diversity in auditions + - higher education
Higher education adaptation to music industry + - adaptation, organization, change, reform
Curriculum music

Appendix IV

Higher Music Education Organizational Adaptation Survey

For the purposes of this survey the term **"Music Unit"** refers to music department, music school, or music institution. The term **"Program"** refers to any course of study leading to a credential: majors, minors, graduate programs, concentrations/emphases, or certificates/badges. **"Full-Time Faculty"** can be any rank or tenure status. **"Part-Time Faculty"** are faculty of any rank not classified as "full-time".

Please rate the accuracy of the following statements as they pertain to your department, program, or institution:

1) Our music unit provides opportunities for faculty to learn about the music industry from experts outside the academy.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
2) Our music unit provides opportunities for faculty to learn about the music industry from other music units.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
3) Our music unit provides opportunities for faculty to learn about the music industry from current students.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
4) Our music unit must continuously change its curriculum to keep up with our peer music units.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
5) Our music curricula are aligned with the music industry.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
6) Student needs are easy to predict in post-secondary music education.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
7) Our music unit is successful in attracting external philanthropic support.
    a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)
8) Our advancement or development office assists with seeking philanthropic support for our music unit.

a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)

9) Our music unit has multiple revenue streams in addition to tuition [such as private funding, grants, endowments].

a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)

10) The music discipline within higher education is rapidly changing.

a. 1 (Least Accurate) / 2 / 3 / 4 (Somewhat accurate) / 5 / 6 / 7 (Most accurate)

The next 10 questions pertain to organizational elements of your music unit. They will ask you about curriculum, faculty, facilities, admissions, governance, leadership, and external partnerships. Each statement completes the statement "In the past five years..."

Please indicate "yes" or "no" to each statement.

In the past five years…

We have created one or more new programs
Yes/No
We have created new courses in subjects where we previously had not offered instruction
Yes/No
We have discontinued elective courses that did not fall within current programs
Yes/No
We have created new courses to better fulfill aspects of our unit's mission
Yes/No

We have hired new full-time faculty as program directors, coordinators, or department heads
Yes/No
We have hired full-time faculty in subject areas where we previously had no specialists
Yes/No
We have eliminated full-time faculty positions with specialties outside of our traditional offerings
Yes/No
We have hired new full-time faculty as required by our mission or strategic plan
Yes/No

We have hired new part-time faculty as program directors, coordinators, or department heads
Yes/No
We have hired part-time faculty in subject areas where we previously had no specialists
Yes/No
We have eliminated part-time faculty positions with specialties outside of our traditional offerings
Yes/No
We have promoted one or more part-time faculty to full-time positions

Yes/No

We have differentiated admissions policies based on a students' intended program
Yes/No
We have altered our audition policies to include greater varieties of musical style
Yes/No
We have narrowed our audition requirements to become more selective for one or more current programs
Yes/No
We have created new admissions policies for all programs
Yes/No

Our leadership has focused on creating new divisions, areas, or departments
Yes/No
Our leadership has focused on expanding the curriculum
Yes/No
Our leadership has focused on reinforcing our existing strengths
Yes/No
Our leadership has focused on creating a new strategic plan
Yes/No

We have created new online programs
Yes/No
We have created new online courses in subjects where we previously had not offered instruction
Yes/No
We have discontinued one or more online programs
Yes/No
We have transferred existing programs online
Yes/No

We have created new committees or administrative units
Yes/No
We have expanded functions of existing committees or administrative units
Yes/No
We have narrowed the duties of committees or administrative offices
Yes/No
We have increased oversight of committees or administrative units
Yes/No

We have created new co-curricular programs, organizations, or activities
Yes/No
We have broadened the activities of existing co-curricular programs
Yes/No
We have discontinued co-curricular programs
Yes/No

We have increased administrative involvement in co-curricular programs
Yes/No

We have built or created new facilities
Yes/No
We have modified existing facilities in order to accommodate a broader range of activities
Yes/No
We have discontinued the use of older facilities
Yes/No
We have acquired facilities from external organizations
Yes/No

We have developed new partnerships with external organizations
Yes/No
We have expanded the scope of our existing collaborations with external organizations
Yes/No
We have discontinued external partnerships or collaborations
Yes/No
We have increased administrative involvement in external partnerships
Yes/No

11) In what state is your music unit located?

    a. [All states in the U.S. listed]

12) Is your music unit:

    a. A free-standing music or arts institution / Embedded into a college or university

13) Is your program:

    a. A public institution / A private institution

14) How many degree-seeking music majors does your music unit serve?

    a. 1-50 / 51-100 / 101- 201/ 201-400 / 401+

15) What degrees does your music unit confer? [Select all that apply]

    a. B.M. / B.A. / M.M. / M. A. / D.M.A. / Ph.D.

16) What most accurately describes *your* primary academic or professional background in music?

    a. Classical Performance / Jazz or Pop Performance / Music Education / Music Business or Law / Musicology or Music Theory / Music Technology or Production / Outside of Music [Specify other]

17) What is your current role?

    a. Department Chair/Head / Program Director / Dean / Chief Academic Officer / President / Other [Specify other]

Appendix V

This appendix lists the emails sent to survey participants. They include the pilot study email, initial email, and three reminder emails.

Pilot Study Email

Hello X,

This is a pilot study for my dissertation in higher education. It will ultimately be sent to the leaders of NASM accredited institutions that hold titles such as department chair, dean, or chief academic officer.

The study primarily will examine two things; 1) how effectively higher music education programs perceive their music industry environment; and 2) how music programs as educational organizations are adapting to their changing environment. I expect this research to hold significance for educators and music industry professionals alike, and to provide useful background for further in-depth studies of the post-secondary music education discipline.

In order to assess the quality of the survey and make corrections before beginning the research, I am sending it to a small group of experienced higher music education faculty. The survey should take 10-15 minutes to complete and each question includes a choice to indicate if the question or item was unclear, as well as an additional space for comments.

You may answer based on your experiences and observations as a faculty member in your current position, or you may answer hypothetically. Results of this pilot test will be used only to improve the quality of the survey and test the statistical analysis.

Thank you so much for your help in evaluating this survey. If you have questions about this study, you may contact me at jakehertzog@uark.edu.

Sincerely,

Jake Hertzog

Initial Email

Hello X,

You have been invited to participate in a research study on music programs in higher education. You have been selected for an invitation because you are listed as the academic leader of a music program or music institution accredited by the National Association of Schools of Music.

If you agree to participate, please click the link below to an electronic survey. This survey intends to assess the strategies that music programs and institutions in higher education are utilizing to adapt to the digital revolution in the music industry. It contains questions pertaining to how your program learns about the music industry, as well as aspects of organizational change.

Your participation is completely voluntary, and you may choose to answer as many or as few questions as you like. All information you provide in the survey is completely anonymous and the survey should take approximately 10-15 minutes. The link to the survey is here: ***[link]***

This study aims to benefit researchers and practitioners in higher music education as well as those in the music industry that interact with conservatories, colleges, and universities. I am the principal researcher in this study. I spent many years as a touring guitarist and session musician before joining the faculty at the University of Arkansas, Fayetteville where I serve as Jazz Area Coordinator. This research is part of my dissertation work toward a Ph.D. in higher education. My faculty advisor on this project is Dr. Ketevan Mamiseishvili (kmamisei@uark.edu), Professor of Higher Education and Associate Dean for Academic and Student Affairs at the College of Education and Health Professionals at the University of Arkansas. If you have any questions regarding this study, you may contact me anytime at: jhertzog@uark.edu.

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

Ro Windwalker, CIP
Institutional Review Board Coordinator
Research Compliance
University of Arkansas
479-575-2208
irb@uark.edu

Thank you so much for your time,

Sincerely,

Jake Hertzog

Reminder Email 1

Hello X,

This is a reminder that you have been invited to participate in a research study on music programs in higher education. You have been selected for an invitation because you are listed as the academic leader of a music program or music institution accredited by the National Association of Schools of Music.

If you agree to participate, please click the link below to an electronic survey. This survey intends to assess the strategies that music programs and institutions in higher education are utilizing to adapt to the digital revolution in the music industry. It contains questions pertaining to how your program learns about the music industry, as well as aspects of organizational change.

Your participation is completely voluntary, and you may choose to answer as many or as few questions as you like. All information you provide in the survey is completely anonymous and the survey should take approximately 10-15 minutes. The link to the survey is here: ***[link]***

This study aims to benefit researchers and practitioners in higher music education as well as those in the music industry that interact with conservatories, colleges, and universities. This research is part of my dissertation work toward a Ph.D. in higher education. My faculty advisor on this project is Dr. Ketevan Mamiseishvili (kmamisei@uark.edu), Professor of Higher Education and Associate Dean for Academic and Student Affairs at the College of Education and Health Professionals at the University of Arkansas. If you have any questions regarding this study, you may contact me anytime at: jhertzog@uark.edu.

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

Ro Windwalker, CIP
Institutional Review Board Coordinator
Research Compliance
University of Arkansas
479-575-2208
irb@uark.edu

Thank you so much for your time,

Sincerely,

Jake Hertzog

Reminder Email 2

Hello X,

This is a reminder that you have been invited to participate in a research study on music programs in higher education. You have been selected for an invitation because you are listed as the academic leader of a music program or music institution accredited by the National Association of Schools of Music.

If you agree to participate, please click the link below to an electronic survey. This survey intends to assess the strategies that music programs and institutions in higher education are utilizing to adapt to the digital revolution in the music industry. It contains questions pertaining

to how your program learns about the music industry, as well as aspects of organizational change.

Your participation is completely voluntary, and you may choose to answer as many or as few questions as you like. All information you provide in the survey is completely anonymous and the survey should take approximately 10-15 minutes. The link to the survey is here: ***[link]***

This study aims to benefit researchers and practitioners in higher music education as well as those in the music industry that interact with conservatories, colleges, and universities. This research is part of my dissertation work toward a Ph.D. in higher education. My faculty advisor on this project is Dr. Ketevan Mamiseishvili (kmamisei@uark.edu), Professor of Higher Education and Associate Dean for Academic and Student Affairs at the College of Education and Health Professionals at the University of Arkansas. If you have any questions regarding this study, you may contact me anytime at: jhertzog@uark.edu.

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

Ro Windwalker, CIP
Institutional Review Board Coordinator
Research Compliance
University of Arkansas
479-575-2208
irb@uark.edu

Thank you so much for your time,

Sincerely,

Jake Hertzog

Reminder Email 3

Hello X,

This is a final invitation to participate in a research study on music programs in higher education. You have been invited because you are listed as the academic leader of a music program or music institution accredited by the National Association of Schools of Music.

If you agree to participate, please click the link below to an electronic survey. This survey intends to assess the strategies that music programs and institutions in higher education are utilizing to adapt to the digital revolution in the music industry. It contains questions pertaining to how your program learns about the music industry, as well as aspects of organizational change.

Your participation is completely voluntary, and you may choose to answer as many or as few questions as you like. All information you provide in the survey is completely anonymous and the survey should take approximately 10-15 minutes. The link to the survey is here: ***[link]***

This study aims to benefit researchers and practitioners in higher music education as well as those in the music industry that interact with conservatories, colleges, and universities. This research is part of my dissertation work toward a Ph.D. in higher education. My faculty advisor on this project is Dr. Ketevan Mamiseishvili (kmamisei@uark.edu), Professor of Higher Education and Associate Dean for Academic and Student Affairs at the College of Education and Health Professionals at the University of Arkansas. If you have any questions regarding this study, you may contact me anytime at: jhertzog@uark.edu.

You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research.

Ro Windwalker, CIP
Institutional Review Board Coordinator
Research Compliance
University of Arkansas
479-575-2208
irb@uark.edu

Thank you so much for your time,

Sincerely,

Jake Hertzog

Appendix VI

This appendix displays four tables expressing the relationships between individual EP items and individual OAS items. Though no major associations were found, many item pairs did have small significant correlations.

Table Appendix VI.A

Correlations Between Individual EP Items and Individual OAS Items: Decentralization

EP Item	*D1*	*D2*	*D3*	*D4*	*D5*	*D6*	*D7*	*D8*	*D9*	*D10*
1	.21*	.2	.3**	.12	.19	.31**	.28**	.24*	.23*	.28**
2	.09	.16	.22*	.22*	.2	.25*	.28**	.23*	.07	.2
3	.18	-.01	.18	.09	.1	.11	.29**	.18	.02	.05
4	.14	-.06	.16	.16	.25*	.33**	.18	.17	-.12	.03
5	.04	.04	.27**	.27*	.03	.04	.09	.15	.22*	.32**
6	-.03	-.18	-.05	.18	-.15	-.06	-.11	.02	.16	.15
7	.13	.2	-.02	.26*	.17	.13	.2	.24*	.07	.38**
8	.16	.12	.08	.1	.08	.26*	.16	.23*	.05	.31**
9	.07	.06	.06	.12	.07	.24*	.12	.22*	.08	.06
10	.06	-.09	.08	-.04	.08	.2	-.02	.08	-.08	.13

** p < .01 (two-tailed)
* p < .05 (two-tailed)

Table Appendix VI.B

Correlations Between Individual EP Items and Individual OAS Items: Generalization

EP Item	*G1*	*G2*	*G3*	*G4*	*G5*	*G6*	*G7*	*G8*	*G9*	*G10*
1	.2	.23*	.33**	.31**	.26*	.16	.06	.21*	.3**	.32**
2	.29*	.1	.23*	.31**	.3**	.06	.1	.13	.25*	.26*
3	.16	.08	.24*	.1	.09	0	.21*	.19	.2	.07
4	.07	.1	.28**	.17	.2	.19	.19	.19	.33**	.02
5	.21*	.17	.28**	.31**	.02	-.01	-.06	.19	.26*	.41*
6	-.02	-.15	-.12	.26*	-.08	-.07	-.21*	.02	.08	.04
7	.24*	.1	.2	.2	.33**	.00	.18	.31**	.26**	.4**
8	.18	.16	.18	.11	.28**	.17	.12	.24*	.18	.27*
9	.15	.05	.29**	.23*	.19	.05	.27*	.34*	.16	.18
10	.16	.11	.18	.16	.18	.06	.09	.16	.04	.06

** p < .01 (two-tailed)
* p < .05 (two-tailed)

Table Appendix VI.C

Correlations Between Individual EP Items and Individual OAS Items: Specialization

EP Item	*S1*	*S2*	*S3*	*S4*	*S5*	*S6*	*S7*	*S8*	*S9*	*S10*
1	.13	-.07	.3**	-.08	.08	-.02	.13	.07	-.05	.13
2	.12	-.07	.29**	-.13	.01	-.09	.06	.07	-.19	.08
3	.03	-.05	.13	-.03	-.01	-.02	.04	.01	-.06	.05
4	.09	.04	.17	.17	.09	-.05	.19	-.03	-.08	.03
5	.07	-.21*	.07	-.14	.06	-.14	.06	.02	.12	-.03
6	-.29**	-.17	-.3**	-.06	.04	-.06	-.12	-.06	.17	-.1
7	.07	-.12	.24*	-.16	.17	-.11	.16	.07	-.07	.19
8	.02	-.2	.12	-.27**	.24*	-.06	.09	-.06	.09	.21*
9	.09	-.02	.23*	-.18	.13	-.07	.21*	.11	-.03	.14
10	.07	.16	.34*	.01	.19	-.1	.12	.08	.02	-.06

** p < .01 (two-tailed)

* p < .05 (two-tailed)

Table Appendix VI.D

Correlations Between Individual EP Items and Individual OAS Items: Formalization

EP Item	*F1*	*F2*	*F3*	*F4*	*F5*	*F6*	*F7*	*F8*	*F9*	*F10*
1	.19	.12	.14	.05	.05	.13	.13	.29**	.29**	.26*
2	.23*	.11	.06	.05	.01	.12	.17	.31**	.16	.2
3	.17	.07	.04	-.06	-.05	.16	.16	.37**	.26*	.03
4	.15	.09	.15	-.02	.11	.07	.03	.11	.04	.08
5	.07	.18	.02	.05	.02	-.11	.09	.13	.13	.15
6	-.1	.06	-.15	-.13	-.01	-.09	-.26*	-.01	.02	.03
7	.2	.37**	.25*	.09	.18	.05	.26*	.27*	.11	.33**
8	.15	.18	.24*	.15	.14	.03	.22*	.15	.12	.25*
9	.23*	.28**	.3**	.03	.17	0	.19	.21*	.01	.09
10	.13	.05	.16	.15	.2*	.18	.08	-.7	.05	.14

** p < .01 (two-tailed)

* p < .05 (two-tailed)