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## Music Alumni Play a Different Tune: Reflections on Acquired Skills and Career Outcomes

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## Music Alumni Play a Different Tune: Reflections on Acquired Skills and Career Outcomes

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### Abstract

This study explores how a variety of music alumni perceive the skills that they learned at their institutions in comparison to their diverse career outcomes using data from the Strategic National Arts Alumni Project (SNAAP). Focusing on alumni with music education, music theory, and music performance majors (16,317 respondents from 105 different arts undergraduate and graduate colleges or arts programs within larger universities), the study demonstrates how a survey of skills learned and career outcomes is a meaningful way of measuring student achievement

and skill. Similarities and differences between these three majors are further investigated using inferential statistical analyses. There is also further discussion suggesting that equating “value” in education solely with alumni income may not be the most appropriate for the arts, and that value instead could be expanded to include various skills and components of job satisfaction in understanding alumni success.

### **Introduction**

There is an increasing trend for requiring colleges and universities to show measures of their effectiveness (Kuh & Ewell, 2010), and one important means of assessing effectiveness is through alumni surveys (Cabrera, Weerts, & Zulick, 2005). A major function of higher education is to help students develop skills that will lead them to success in the workplace (Evers, Rush, Berdrow, 1998; Tait & Godfrey, 1999), and, as a result, these skills become a point of focus when evaluating effectiveness. While some acquired skills are considered discipline-specific, many “transferable skills,” such as problem solving and effective communication, are applicable to a broad range of fields (Bradshaw, 1985; Kemp & Seagraves, 1995; Stasz, 1997) and crucial for a liberal arts education (Pascarella, Wang, Trolian, & Blaich, 2013). Although not all skills learned in higher education settings may transfer to the workplace (Stasz, 2001), institutions must make every effort to prepare students to become contributing members of society. Alumni surveys can provide direct information on both skills acquired and career attainment, as alumni can report back to the institution not only what important workplace skills were most and least developed while at their institutions, but also a variety of information concerning their current careers to assist in the development of curricula.

### **Skills in the Curriculum**

Colleges and universities provide a forum for graduates to enter the workforce prepared (Beard, 2009). Even after stressing the importance of transferable skills (Billing, 2007), institutions of higher education still are under considerable pressure to produce a return on investment through capable, productive graduates (Bogue & Johnson, 2010; Collins, 1996). In addition to the need to prepare graduates for the workforce, curriculum requirements place currently enrolled students under a tremendous burden to adapt to coursework perceived as important within their degree program (Burland & Pitts, 2007). However, this concern for curricular requirements must be balanced with a need for preparation in the skillset required from all professional musicians. For instance, graduates with music education degrees reflecting on their coursework indicated that although they thought they obtained a great level of career-relevant knowledge, not all of it was used in their current K-12 music educator duties (Millican, 2008), further emphasizing the importance of adapting the higher education

curriculum to meet the needs of the workforce (Collins, 2011). Yet research with enrolled music students also indicates that they identify technical musical aptitude as a key element of their studies, even across careers that have less emphasis on music (Hannan, 2006). These studies provide further evidence for the perspective gained from alumni evaluations of educational experiences, as they may not align with current student expectations and understandings.

Many higher education institutions have begun to scrutinize whether they are effectively teaching necessary skills within their degree programs. Arts programs in particular have been under fire for a lack of preparation in dealing with the “real world” of work (Cantor, 2012). Outside of technical music knowledge and theory, music graduates need many skills similar to those in other degree programs, including networking and administrative skills (Creech et al., 2008). One study that surveyed European academies found that these practical business and management-related skills were greatly underemphasized within respective curricula (Bauer, Viola, & Strauss, 2011). Furthermore, artists themselves recognize the need for “learning on the fly” and the power of networking and similar career mindsets (Smilde, 2008). Programs featuring entrepreneurship, which blends career self-management and enterprise creation, are becoming increasingly popular as one means of bridging this gap between creative technique and necessary practical knowledge (Hong, Essig, & Bridgstock, 2012).

Arts programs, among many other disciplines in higher education, recognize this discrepancy between skills emphasized in the curriculum and those needed in the workplace as problematic and requiring regular updates. However, another issue that arises when assessing skills in the arts comes from the argument that it is often difficult to align some of the arts curriculum with rigid accountability standards, as they may not take into account the unique skills and experiences of arts students (Johnson, 2002). Nevertheless, research indicates that students in the arts are especially adept at certain types of skills, including incorporating verbal studio feedback into revisions of their work (Edstrom, 2008) and critical thinking and interpersonal understanding (Badcock, Pattison, & Harris, 2010). Recent research suggests that compared to other majors fields, arts majors excel in creative thinking but are less confident in their financial and business skills, which is a concern given that a relatively large percentage of arts majors plan on self-employment in the future (Miller, Dumford, Gaskill, Houghton, & Tepper, 2016). It is also important to explore nuances even between specific sub-disciplines within the arts as there may be differences in educational experiences and career outcomes (Miksza & Hime, 2016; Miller & Dumford, 2015).

### **Accountability and Outcomes**

Like many arts-related majors, music programs face added difficulties when it comes to evaluation and demonstration of accountability. The skills needed by working musicians

continue to fluctuate as the industry shifts in response to economic instabilities, self-employment patterns, and technology (Coulson, 2012; Kerr & Knight, 2011; Rowley, 2012). In comparison to other careers, musicians have much more nuanced definitions of success (Bennett, 2007; Heslin, 2005), which might have developed over the course of obtaining their degree (Freer & Bennett, 2012). Different approaches are currently being assessed for effectiveness, including more involved advisors from an instructional perspective (Johansson, 2012), increased emphasis on evaluation practices (Scott, 2012), and revised pedagogies (Garnett, 2013; Johansen, 2009).

Arts programs have recently been under scrutiny for the career outcomes of their graduates. Data indicates that those majoring in the arts have some of the lowest income levels, especially among recent college graduates (Carnevale, Cheah, & Strohl, 2012), and arts majors are widely considered in the popular press to be “worthless” in terms of income and employment (Cantor, 2012). While institutional administrators certainly want to see their graduates employed, this external pressure to use income as the “end-all-be-all” measure of career success may not be capturing a complete vision of successful outcomes. Other aspects of one’s career can provide just as much, if not more, of a rewarding experience as can the traditional measures of income and prestige, especially in fields like the arts that are not generally associated with higher career earnings. For example, pursuing a music degree does appear to make a difference in improving many generalizable skills, including higher-order thinking (Sheldon, 2005), but there still exists a definite disconnect between what currently enrolled students find to be most important for their careers and what is prized in the academy (Johnson, 2014). The field of music in higher education requires more extensive research, specifically with evaluation of effectiveness, to corroborate some of these earlier findings and prompt administrators to act (Jørgensen, 2010).

### **The Current Study**

Given the need for higher education institutions to gather evidence for their effectiveness through the skills acquired and career outcomes of alumni, as well as the criticisms arts disciplines face in these areas, it is important for the field of music to address these issues. Are the skills learned while at colleges and universities transferable to workplace experiences? What are the career outcomes of music alumni, in terms of not only employment status and income, but other career elements as well? Are there differences in skills and outcomes even within the field of music, comparing music education, music theory, and music performance majors? The current study utilizes information from an arts alumni survey to address these questions, exploring various types of skills and competencies and various aspects of career achievement, across arts alumni with music degrees.

### **Method**

This study used data from the 2011, 2012, and 2013 administrations of the Strategic National Arts Alumni Project (SNAAP). SNAAP is an online alumni survey designed to collect data annually about the educational experiences and careers of alumni from arts high schools, art and design colleges, conservatories, and arts schools, departments, and programs within comprehensive universities. Relevant to a variety of fields, including arts education, educational psychology, higher education, sociology, and economics, the SNAAP survey was developed by educational researchers\* and survey methodologists in conjunction with arts educators and policy analysts with expertise in arts training and career trajectories. Any degree-granting higher education institution with arts majors (broadly defined), as well any high school that has a specific arts focus, is eligible to participate in SNAAP. Institutions chose to participate in SNAAP for a fee, and customized institutional reports are provided in exchange for this fee. The survey is administered annually, with an average of around 30,000 respondents from 50-60 institutions per year.

### **Participants**

For the purposes of this study, only undergraduate and graduate alumni with primary majors of music education; music history, composition, and theory; and music performance were included. This yielded a sample of 16,317 alumni from 105 different arts undergraduate and graduate colleges or arts programs within larger universities. All institutions were located in the United States. Of those respondents used in this study, 10,250 were undergraduate level alumni (63%) and 6,067 were graduate level alumni (37%). Respondents came from a variety of institutional Carnegie classifications, including Research Universities-Very High (47%), Research Universities-High (15%), Doctoral Research Universities (7%), Master's level universities (15%), Baccalaureate colleges (6%), and specialized Schools of Art, Music, and Design (10%). Nearly three-quarters (73%) of respondents were from public institutions. The sample was 47% male, 52% female, and 0.1% transgender. The majority (91%) reported their ethnicity as Caucasian in at least one of their selected race/ethnicity options, and 88% reported Caucasian as their only race/ethnicity. Alumni represented a wide range of graduating cohorts: 1983 and before (34%), 1984-1993 (17%), 1994-1998 (9%), 1999-2003 (12%), 2004-2008 (15%), and 2009-2013 (14%).

For the grouping variable of major, the distribution was: music education (28%); music history, composition, and theory (9%); and music performance (63%). These groups were created based on a longer list of 79 different arts majors that could be selected. Music education was a separate category on the list of 79 majors. However, music history, composition, and theory was an upper-level combination of music composition, ethnomusicology, music theory, and musicology majors. Music performance was an upper-

level combination of brass, church/sacred music, conducting, guitar, jazz studies, keyboard, music (general), percussion, strings, voice, woodwinds, and other music performance majors. (For details on the other majors included in the SNAAP categorizations, see the survey codebook at <http://snaap.indiana.edu/pdf/2013/SNAAP%202013%20Codebook.pdf>.)

The average institutional response rate was 18%. Response rates for the grouping variable generally mirrored the overall rate, with 18% for music education, 20% for music history, composition, and theory, and 17% for music performance. This relatively low response rate may impact the representativeness of the sample, although recent research suggests that surveys with lower response rates may be able to provide an adequately representative sample (Fosnacht, Sarraf, Howe, & Peck, 2017; Lambert & Miller, 2014). Alumni surveys historically have lower response rates compared to other types of surveys due to reasons such as poor contact record-keeping and suspicion of money solicitation (Smith & Bers, 1987). More recent applied research in the field indicates that many single-institution alumni surveys have response rates even lower than the 18% for this study, with examples ranging from 10% to 13% (Miller & Sharkness, 2015; Salisbury, Dyer, Trolan, & Archibald, 2015; Skillrud, Christy, Johnson, Dunbar, & Hotchkiss, 2015; Wharton & Craft-Morgan, 2015). Even targeted attempts to raise alumni survey response rates through mailing postcard pre-notifications did not increase response rates above 38% (Lalasz, Doane, Springer, & Dahir, 2014). During the development of SNAAP, a study based on 2009 field-test data that contacted email nonrespondents via telephone and postal mail did not discover substantial bias (Kennedy, Tepper, & Lambert, 2010). Yet given the low response rate, there is still the potential for bias in the sample and generalizations should be made judiciously.

### **Procedures**

Participating institutions provided SNAAP staff with email contact information for all living arts alumni, and in the fall of each administration year all alumni with a valid email address were sent an invitation including a link to the survey with a unique identification number. Participants could login to the survey through their unique link multiple times, so they were not constrained to respond to all survey questions during a single sitting. However, the unique link tracking system ensured that participants could only submit their completed survey once. As stipulated by the Institutional Review Board agreement for all participating institutions, participants were contacted by email a maximum of five times. If institutions participated in multiple administration years, respondents who had already completed the survey were not contacted again, and therefore each alumni is only represented once in the data set. The median completion time was 22 minutes. Of those who responded to the survey, 86% reached the final page and submitted complete information. Data for partial completers was used in analyses when available, but no imputations were applied for missing data.

## **Measures**

The measures were questions included in a larger survey administered to participants online. For the dependent ordinal measures, participants were asked about a set of 16 different skills and competencies (see Table 1 for complete list). First, they were asked how much they acquired each of the particular skills at their institution, with a 4-point response scale ranging from “Not at all” to “Very much.” Later in the survey, they were shown this set of 16 skills again and asked to rate the importance of these skills in their work, with a 4-point response scale ranging from “Not at all important” to “Very important.”

There were additional dependent ordinal measures asking respondents to report their overall satisfaction with their time at the institution (with a 4-point response scale ranging from “Poor” to “Excellent”), whether they would attend the same institution again (with a 5-point response scale ranging from “Definitely no” to “Definitely yes”), and preparation for further education (with a 4-point response scale ranging from “Not well at all” to “Very well” and excluding those who did not pursue further education). As part of the demographics questions, alumni reported their individual income for the previous year using ranges of \$10,000 increments, which were then converted to mid-point values for a continuous variable. Participants provided categorical responses for the time that it took to get their first job (also with “Pursued further education” as a response option). For those who did work directly after leaving their program, they were asked about the relevance of training to this first job (with response options of “Closely related,” “Somewhat related,” and “Not related”). Participants reported the current job in which they spent the majority of their time (using a list of 45 options, including an “other” write-in option), and then reported the relevance of this job to their training (with response options of “Very relevant,” “Relevant,” “Somewhat relevant,” and “Not at all relevant”). Furthermore, participants were asked if they had ever been self-employed, with “Yes, I do this currently,” “Yes, I have done it in the past but no longer do,” and “No, I have not done this” as response categories.

## **Results**

To compare across the grouping variable of major, ANOVAs were run for continuous and Likert-type response options and Chi-squared analyses were run for the remaining categorical variables. Alpha was set to .001 to reduce incidence of Type I error (Field, 2009). Results from the ANOVAs (Table 1) revealed several patterns by major. Music history, composition, and theory majors reported acquiring more clear writing, critical thinking, creative thinking, technological skills, and research skills than their music education and music performance peers. Music performance and education majors reported greater development of artistic technique. In addition, music performance majors had greater development of their entrepreneurial skills while at their institutions, relative to the other types of music majors.



Music education majors acquired more broad knowledge, persuasive speaking, project management, financial and business, leadership, interpersonal, networking, and teaching skills than their counterparts.

Table 1.

*Average ratings of skills, institutional experience, and income by major.*

	Music Performance <i>M (SD)</i>	Music History, Comp., & Theory <i>M (SD)</i>	Music Education <i>M (SD)</i>	F	Partial $\eta^2$
<b>How their institution helped them acquire or develop each of the following skills and abilities:</b>					
Critical thinking and analysis of arguments and information	3.23 (.775)	3.43 (.765)	3.33 (.671)	34.34	.008
Broad knowledge and education	3.35 (.743)	3.43 (.687)	3.54 (.597)	85.62	.016
Improved work based on feedback	3.44 (.683)	3.48 (.680)	3.48 (.624)	1.84	.002
Creative thinking and problem solving	3.31 (.761)	3.48 (.695)	3.38 (.678)	20.34	.004
Research skills	3.02 (.890)	3.29 (.831)	3.05 (.825)	55.09	.005
Clear writing	2.95 (.893)	3.20 (.850)	3.10 (.786)	44.91	.008
Persuasive speaking	2.63 (.937)	2.74 (.939)	2.86 (.854)	57.09	.015
Project management skills	2.76 (.984)	2.84 (.950)	2.98 (.915)	52.87	.013
Technological skills	2.47 (.976)	2.87 (.940)	2.63 (.911)	114.50	.015
Artistic technique	3.67 (.595)	3.45 (.732)	3.67 (.546)	89.56	.009
Financial and business management skills	1.83 (.843)	1.74 (.804)	1.92 (.832)	25.18	.006
Entrepreneurial skills	1.92 (.889)	1.82 (.857)	1.90 (.844)	13.54	.001
Interpersonal relations and working collaboratively	3.20 (.833)	3.03 (.896)	3.28 (.759)	43.35	.007
Leadership skills	2.98 (.924)	2.86 (.951)	3.25 (.786)	139.46	.028
Networking and relationship building	2.77 (.945)	2.73 (.926)	2.97 (.884)	48.59	.016
Teaching skills	3.03 (.926)	3.00 (.982)	3.63 (.585)	799.11	.105
<b>How important are the following to perform effectively in your profession or work life?</b>					
Critical thinking and analysis of arguments and information	3.66 (.578)	3.78 (.437)	3.70 (.542)	16.84	.004
Broad knowledge and education	3.73 (.527)	3.77 (.488)	3.84 (.377)	48.39	.013
Improved work based on feedback	3.74 (.501)	3.72 (.508)	3.73 (.485)	.272	.000
Creative thinking and problem solving	3.84 (.422)	3.88 (.393)	3.86 (.368)	6.20	.002
Research skills	3.29 (.770)	3.47 (.697)	3.22 (.774)	32.73	.009
Clear writing	3.47 (.743)	3.68 (.583)	3.56 (.655)	24.84	.007
Persuasive speaking	3.56 (.676)	3.59 (.608)	3.65 (.589)	17.50	.005
Project management skills	3.57 (.706)	3.63 (.592)	3.64 (.634)	14.93	.004
Technological skills	3.37 (.709)	3.57 (.609)	3.53 (.604)	60.41	.016
Artistic technique	3.43 (.994)	3.25 (1.06)	3.46 (.853)	23.57	.006
Financial and business management skills	3.24 (.820)	3.10 (.871)	3.10 (.815)	17.84	.005
Entrepreneurial skills	3.06 (.976)	2.93 (1.01)	2.71 (1.00)	80.03	.021
Interpersonal relations and working collaboratively	3.86 (.391)	3.78 (.434)	3.85 (.388)	3.138	.001
Leadership skills	3.69 (.569)	3.62 (.639)	3.83 (.425)	68.82	.018

Networking and relationship building	3.70 (.569)	3.61 (.608)	3.66 (.567)	7.04	.002
Teaching skills	3.54 (.747)	3.45 (.804)	3.80 (.492)	125.13	.032
Income	52,872.84 (42,289.92)	58,626.27 (47,766.07)	56,393.11 (36,991.43)	16.36	.004
How well institution prepared them	3.44 (.745)	3.51 (.712)	3.63 (.601)	52.11	.014
Rating of institutional experience	3.48 (.687)	3.52 (.693)	3.61 (.563)	38.67	.012
If they would attend the same institution	4.05 (1.07)	4.12 (1.04)	4.29 (.923)	39.75	.012

\*All differences significant at  $p < .001$  level (other than instrev & wkskillrev (n.s.) and wkskillwkoth ( $p < .05$ )).

Encouragingly, some of these same patterns also emerged when looking at the skills that were most important in their current work life, indicating that in at least some areas there is relative alignment between the skills acquired and the importance of skills in the workplace (Table 1). Music history, composition, and theory majors reported greater importance of clear writing, critical thinking, technological skills, and research skills than their music education and music performance peers. Similar to the findings on skill development, music performance and education majors cited greater importance of artistic technique in their work, with music performance majors also reporting greater importance of entrepreneurial skills, relative to the other majors. Music education majors reported greater importance of broad knowledge, persuasive speaking, project management, leadership, interpersonal, and teaching skills than their counterparts. While many of these patterns align with those for skill acquisition, it should be noted that while music performance majors cited a greater importance of financial and business management skills, as well as networking and relationship building, than the music theory and music education majors, they did not report the highest skill development in these areas.

Music education majors tended to give the highest ratings for their general institutional experiences, relative to music theory and music performance majors. Music education majors gave higher ratings for their overall institutional satisfaction, how well their institution prepared them for future education, and their likelihood of whether they would return to the same institution. However, music history, composition, and theory majors reported the highest current incomes, with music education in the middle and music performance the lowest. For all of the ANOVAs, partial eta squared (Field, 2009) was included as a measure of effect size (Table 1). This can be interpreted as the amount of explained variance accounted for by the grouping variable difference. It should be noted that the magnitude of difference for nearly all of these comparisons is small, although this is common in fields such as education and social science (Ferguson, 2009).

The Chi-squared analyses (Table 2) for the categorical variables also show that differences exist between these three types of music majors. Music education majors are more likely to find their first job either before leaving school or within four months. Furthermore, they are more likely to report that this first job was closely related to their arts training. In contrast,

music performance majors and music history, composition, and theory majors are more than twice as likely as their music education counterparts to go on to further education after graduation. Not surprisingly, when looking at the jobs in which graduates currently spend the majority of their time, music performance majors are more likely to be musicians and private teachers of the arts, while music composition, history, and theory graduates follow careers as higher education arts educators, and music education alumni teach the arts in K-12 schools. In addition, music performance majors report higher levels of being currently self-employed. When relating all of these current jobs to their arts training, those graduating in music education more frequently report that their arts training is very relevant. In these analyses, Cramer's V provided information about effect size, suggesting that the magnitude of difference was small to moderate (Field, 2009).

Table 2.  
*Percentage of alumni by major.*

	Music Performance	Music History, Comp., & Theory	Music Education	$\chi^2$	Cramer's V
Obtained work prior to leaving or in less than 4 months after graduation	60.0%	57.7%	75.3%	1037.9	.178
Pursued further education	21.5%	21.2%	8.0%		
First job was closely related to their arts training	48.7%	39.9%	76.2%	1514.3	.215
<b>Current job in which they spend the majority of their time:</b>					
Higher education arts educator	11.8%	19.6%	6.6%		
K-12 arts educator	8.2%	3.6%	35.5%	2403.4	.280
Private teacher of the arts	8.8%	3.6%	4.8%		
Musician	21.1%	18.1%	10.4%		
Training was very relevant to current job in which they spend the majority of their time	47.3%	44.4%	55.7%	218.2	.085
Currently self-employed	52.3%	46.3%	36.6%	432.1	.116

\*Chi-squared analyses shown are all statistically significant at  $p < .001$  level

## Discussion

Overall, it would seem that the skills they reported acquiring as students in certain music majors during their institutional experience are the same skills that as alumni they find most necessary to perform well in their careers. Many of these differences between types of music majors are not surprising, given the differences in their curricular and workplace experiences. Music education majors, who are more likely to work as K-12 arts educators, were higher than the other types of music majors in both their acquisition and importance of teaching skills, leadership skills, interpersonal relations, and persuasive speaking. As pre-service teachers, music education majors are required to take pedagogical courses and complete student-

teaching field experiences (Darling-Hammond, 2010) and sometimes service-learning (Feen-Calligan & Matthews, 2016); all of these skills are associated with these requirements. Music history, theory, and composition majors reported higher levels of some of the more traditionally cognitive and academic skills, such as critical thinking, creative thinking, research skills, and clear writing, in terms of both their skill development and workplace importance. More likely to be currently working in higher education, the music theory majors experienced a less applied, more conceptual curriculum as students, which may be the reason for their relatively enhanced skills in these areas as well as their relatively lower development and importance of artistic technique.

While some of these skills seem to be tailored toward certain majors, there are still some skills that require additional development. Music performance majors do rate their development of entrepreneurial skills higher than other music majors, yet their development of this skill is still relatively low compared to other skills. In fact, across all three majors, entrepreneurial skills, along with financial and business management skills, received much lower average acquisition ratings (all falling below 2.0). However, the average ratings of importance for business and entrepreneurial skills are quite high across all three majors, with music performance majors rating them significantly higher. This gap between the perceived acquisition of skills and the importance of such skills in the workplace should be a concern for music faculty and administrators. Music students of all major types need increased exposure to business and entrepreneurial skills to be better prepared for the logistic and practical components of work in their field. Trends in the arts economy suggest that since many artists are self-employed, they need direct instruction in entrepreneurial experiences such as marketing, budgeting, taxes, and strategic planning (Haase & Lautenschlager, 2011). Since we also see that music performance majors are more likely to be self-employed, this is a place where more curriculum reform might aid in the development of music professionals. In expanding the curriculum to include a greater focus on entrepreneurial skills for all types of music majors, it may be helpful to borrow from existing models currently applied in arts administration programs (Hong et al., 2012). Reconceptualizing the traditional music curriculum to include business management in addition to the strict focus on technique would allow a variety of students in music-related majors to better develop transferable skills that will be useful in their future career success. This need is also reflected in the accreditation agencies that note the importance of more practical workplace training experiences through internships (National Association of Schools of Music, 2016). The field might also benefit from adapting and applying course content and learning experiences commonly used in other non-arts disciplines, such as business or social service professions. Many of these majors strongly encourage internships or service-learning as part of their curriculum. A great deal of research supports the utilization of these types of “high-impact practices” (Kuh, 2008), linking them to several positive outcomes (Kuh & O’Donnell, 2013) including the development of

transferable skills (Berger, 2012; Sandeen, 2012).

It is interesting, although perhaps not surprising, to note the differences between types of music majors in terms of some more general evaluations of their educational experiences. In comparison to other degree types, music education majors gave the highest ratings of their overall institutional experience, the likelihood of attending the same institution if they had to do it over again, and how well their institution prepared them for further education. It may be that music education majors have a more prescribed course plan, as well as a more direct career outcome, and this decreases the ambiguity and uncertainty they feel towards their chosen major and subsequent career. In turn, they feel more positively about their educational choices and experiences, whereas music performance or theory majors may experience greater struggle in their early career trajectories and this may impact their institutional evaluations. This difference is further reflected upon examination of early career comparisons across majors. Three quarters of music education majors obtained work either prior to leaving their institutions or in less than 4 months after graduation, much higher than the performance and theory majors. Additionally, over three quarters said that their first job was closely related to their arts training. Music education majors, through their student teaching field experiences and other educational resources, seem to have a more specified route that guides them into the workplace. While performance and theory majors may have more fluidity and flexibility in their career paths, it may still be helpful for institutions to look into creating better networks and resources for these students as well. This could be accomplished through expanded opportunities for internships, discipline-specific career fairs, connecting extracurricular activities to field experiences, or networking events with alumni and others in the arts community (Callanan & Benzing, 2004; Maguire, Mishook, Garcia, & de Gaillande, 2013). In looking at their current career outcomes, it is important to note the high percentages of music majors of all types that are currently working as professional musicians or music teachers. Other research utilizing arts alumni data (Dumford & Miller, 2017) suggests that the intrinsic satisfaction with aspects of one's job, such as opportunities to be creative or the ability to do work that reflect one's personality, interests, and values, is higher for arts alumni who currently work in the arts, while extrinsic satisfaction, which involves things like job security and income, is higher for those working outside of the arts. Because job satisfaction is not solely based on monetary compensation, it is erroneous to equate alumni success with a high income. Cross-cultural research (Mok, 2010) also supports the importance of intrinsic satisfaction that arises from making music, finding that musicians value their work for aesthetic and personal enjoyment, bonding and identity building, and community building. The fact that so many music alumni are still working in their degree field suggests that they have found their own personal interpretation of satisfaction and success.

Bennett (2009) studied the skills and career expectations of performing arts students and

found evidence that self-identity as an artist tied into their understanding of career success. Performing artists are resourceful and can adapt to the limitations of their field, crafting what Hall (1976) termed “protean careers”: like the Greek god Proteus who could change form at will, these careers continually require new skills as they take on multiple roles concurrently. For instance, a musician could be performing in multiple live shows, participating in studio sessions, and teaching private lessons, and all of these might overlap during certain time periods. While some of these might be motivated by more practical and extrinsic factors, such as earning extra cash to purchase new equipment, other choices are more related to personal goals and values. From the perspective of social cognitive career theory (Lent & Hackett, 1987), pursuing an arts career is related to successful engagement with the artistic activity itself, with success being found in creative or personal development as “compensation can be considered quite differently from traditional rewards such as career advancement or salary” (Bennett, 2009, p. 311). Higher education institutions could benefit from the recognition that perhaps one’s intrinsic satisfaction plays a larger role in how one thinks about his/her occupational success, and adjust their definitions and assessment of success accordingly. Furthermore, by assessing a wide variety of skills, in addition to just those artistic techniques associated with one’s major, alumni survey results can demonstrate that a variety of competencies are gained during the educational experience, which is a success in and of itself.

### **Limitations**

Although there are several strengths of this study, some limitations should be noted. Data was collected only from institutions that chose to participate in the project, and only from alumni with contact information. While a variety of institutional types, such as Carnegie classification, control (public vs. private), and enrollment size, were included in the sample, there may be a great degree of difference by these factors, in terms of music program organization, acceptance requirements, and curricular emphases, which was not specifically accounted for in this study. Also, only higher education institutions from the United States participated in the study, thus the findings may not extend to an international population given the diversity of music programs and curricula across the globe. Even within the United States, not all subpopulations were adequately represented, as the sample was racially homogenous with the vast majority reporting their race/ethnicity as Caucasian. Additionally, the relatively low response rate, as previously discussed, might also have an impact on representativeness. Therefore, the sample may not be representative of all music alumni and caution should be made when making generalizations.

Furthermore, it should also be noted that this study relied on self-reported perceptions of institutional contribution to skill development and workplace importance, which may not be completely objective. However, most studies looking at student self-reports in higher education suggest that self-reports and actual abilities are positively related (Anaya, 1999;

Hayek, Carini, O'Day, & Kuh, 2002; Laing, Sawyer, & Noble, 1988; Pace, 1985; Pike, 1995) and social desirability bias does not play a major role in their responses for surveys of basic cognitive and academic behaviors (Miller, 2012). Self-reported acquired skills and competencies were also used as a proxy measure for curriculum, rather than a direct measure. Students must actively engage in curricular experiences for there to be an increase in skills based on assignments and activities. The effects sizes were also somewhat small in magnitude, which should be taken into account in the context of practical differences and curricular considerations.

### **Conclusions**

Future research should continue to bridge the gap between acquired skills and career demands, as well as the measurement of successful career outcomes and comparisons across different sub-types of music majors. It would be informative to follow up this research by examining even more finely grained major differences, such as comparing the music education specializations of K-5, middle school, and high school or the music performance areas of instrumental, vocal, and conducting. It is also important for future research to address additional variables that might be influencing skill development and career outcomes. Looking for trends in the data across graduating cohorts and demographic variables like gender and race/ethnicity can shed more light on the larger picture of how the music field can best educate students. It may also be valuable to develop more global models that incorporate multiple alumni and institutional characteristics in the prediction of various skills and career outcomes, as this would provide greater explanatory power in the patterns of findings.

Knowledge of necessary skills for career success is essential for creating an effective curriculum. Music faculty and administrators may be able to borrow and learn from other arts fields, such as the visual arts or other performance areas (i.e. theater and dance), as well as non-arts fields when it comes to successful curricular reform or creating resources to assist students in their transition to the workplace. Higher education institutions cannot escape the growing accountability demands, and assessment of all types can play an indispensable role in this movement. Gathering data from current students and faculty is vital, but collecting alumni data provides an important part of the picture as well. If the goal of higher education is to develop successful individuals (and acknowledging that said success may vary in definition depending on the field), more information needs to be collected from a variety of stakeholders to best prepare students to enter the music field immediately ready to contribute.

### **References**

Anaya, G. (1999). College impact on student learning: Comparing the use of self-reported gains, standardized test scores, and college grades. *Research in Higher Education*,

- 40, 499-526. doi: 10.1023/A:1018744326915
- Badcock, P. B. T., Pattison, P. E., & Harris, K. L. (2010). Developing generic skills through university study: A study of arts, science and engineering in Australia. *Higher Education, 60*, 441-458. doi: 10.1007/s10734-010-9308-8
- Bauer, C., Viola, K., & Strauss, C. (2011). Management skills for artists: 'learning by doing'? *International Journal of Cultural Policy, 17*(5), 626-644. doi: 10.1080/10286632.2010.531716
- Beard, D. F. (2009). Successful applications of the balanced scorecard in higher education. *Journal of Education for Business, 84*(5), 275-282. doi : 10.3200/JOEB.84.5.275-282
- Bennett, D. (2007). Utopia for music graduates. Is it achievable, and how should it be defined? *British Journal of Music Education, 24*(2), 179-189. doi: 10.1017/S0265051707007383
- Bennett, D. (2009). Developing realistic notions of career in the performing arts. *Arts & Humanities in Higher Education, 8*(3), 309-327. doi: 10.1177/1474022209339953
- Berger, L. (2012). *All work, no pay: Finding an internship, building your résumé, making connections, and gaining job experience*. New York: Ten Speed Press/Random House.
- Billing, D. (2007). Teaching for transfer of core/key skills in higher education: cognitive skills. *Higher Education, 53*(4), 483-516. doi: 10.1007/s10734-005-5628-5
- Bogue, E. G., & Johnson, B. D. (2010). Performance incentives and public college accountability in the United States: a quarter century policy audit. *Higher Education Management and Policy, 22*(2), 9-30. doi: 10.1787/17269822
- Bradshaw, D. (1985). Transferable intellectual and personal skills. *Oxford Review of Education, 11*(2), 201-216. doi: 10.1080/0305498850110207
- Burland, K., & Pitts, S. (2007). Becoming a music student: investigating the skills and attitudes of students beginning a music degree. *Arts and Humanities in Higher Education, 6*(3), 289-308. doi: 10.1177/1474022207080847
- Cabrera, A. F., Weerts, D. J., & Zulick, B. J. (2005). Making an impact with alumni surveys. *New Directions for Institutional Research, 2005*: 5-17. doi: 10.1002/ir.144
- Callanan, G., & Benzing, C. (2004). Assessing the role of internships in the career-oriented employment of graduating college students. *Education + Training, 46*(2), 82-89. doi: 10.1108/00400910410525261
- Cantor, M. (2012, April 23). The 13 most worthless majors. *Newser*. Retrieved from [www.newser.com](http://www.newser.com)



- Carnevale, A. P., Cheah, B., & Strohl, J. (2012). *College majors, unemployment, and earnings: Not all college degrees are created equal*. Washington, DC: Center of Education and the Workforce, Georgetown University.
- Collins, A. (2011). An engaged approach to redesigning a Bachelor of music education. *Australian Journal of Music Education* (1), 57-65.
- Collins, I. H. (1996). Assessment and evaluation in music teacher education. *Arts Education Policy Review*, 98(1). doi: 10.1080/10632913.1996.9935088
- Coulson, S. (2012). Collaborating in a competitive world: musicians' working lives and understandings of entrepreneurship. *Work, Employment and Society*, 26(2), 246-261. doi: 10.1177/0950017011432919
- Creech, A., Papageorgi, I., Duffy, C., Morton, F., Haddon, E., Potter, J., de Bezenac, C., Whyton, T., Himonides, E., & Welch, G. (2008). From music student to professional: the process of transition. *British Journal of Music Education*, 25(3), 315-331. doi: 10.1017/S0265051708008127
- Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education*, 61(1-2), 35-47. doi: 10.1177/0022487109348024
- Dumford, A. D., & Miller, A. L. (2017). Assessing alumni success: Income is NOT the only outcome! *Assessment & Evaluation in Higher Education* 42(2), 195-207. doi: 10.1080/02602938.2015.1098587.
- Edstrom, A. M. (2008). Art students making use of studio conversations. *Art, Design & Communication in Higher Education*, 7(1), 31-44. doi: 10.1386/adche.7.1.31/1
- Evers, F. T., Rush, J. C., & Berdrow, I. (1998). *The bases of competence: Skills for lifelong learning and employability*. San Francisco, CA: Jossey-Bass.
- Feen-Calligan, H., & Matthews, W. K. (2016). Pre-professional arts based service-learning in music education and art therapy. *International Journal of Education & the Arts*, 17(17), 1-36. Retrieved from <http://www.ijea.org/v17n17/>
- Ferguson, C.J. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice*, 40(5), 532-538. doi: 10.1037/a0015808
- Field, A. (2009). *Discovering statistics using SPSS*. London: Sage Publications.
- Fosnacht, K., Sarraf, S., Howe, E., & Peck, L. (2017). How important are high response rates for college surveys? *The Review of Higher Education*, 40(2), 245-265. doi: 10.1353/rhe.2017.0003
- Freer, P. K., & Bennett, D. (2012). Developing musical and educational identities in

- university music students. *Music Education Research*, 14(3), 265-284. doi: 10.1080/14613808.2012.712507
- Garnett, J. (2013). Beyond a constructivist curriculum: A critique of competing paradigms in music education. *British Journal of Music Education*, 30(2), 161-175. doi: 10.1017/S0265051712000575
- Haase, H., & Lautenschlager, A. (2011). The “teachability dilemma” of entrepreneurship. *International Entrepreneurship and Management Journal*, 7(2), 145–162. doi: 10.1007/s11365-010-0150-3
- Hall, D. (1976). *Careers in organizations*. Glenview, IL: Scott, Foresman.
- Hannan, M. (2006). Contemporary music student expectations of musicianship training needs. *International Journal of Music Education*, 24(2), 148-158. doi: 10.1177/0255761406065476
- Hayek, J. C., Carini, R. M., O’Day, P. T., & Kuh, G. D. (2002). Triumph or tragedy: Comparing student engagement levels of members of Greek-letter organizations and other students. *Journal of College Student Development*, 43(5), 643-663.
- Heslin, P. A. (2005). Conceptualizing and evaluating career success. *Journal of Organizational Behavior*, 26, 113-136. doi: 10.1002/job.270
- Hong, C., Essig, L., & Bridgstock, R. S. (2012). The enterprising artist and the arts entrepreneur: Emergent pedagogies for new disciplinary habits of mind. In N. Chick, A. Haynie, & R.A.R. Gurung (Eds.), *Exploring more signature pedagogies: Approaches to teaching disciplinary habits of mind* (pp. 68-81). Sterling, VA: Stylus Publishing, LLC.
- Johansen, G. (2009). An education politics of the particular: Promises and opportunities for the quality of higher music education. *Arts Education Policy Review*, 110(4), 33-38. doi: 10.3200/AEPR.110.4.33-38
- Johansson, K. (2012). Experts, entrepreneurs and competence nomads: The skills paradox in higher music education. *Music Education Research*, 14(1), 45-62. doi: 10.1080/14613808.2012.657167
- Johnson, C. (2002). The position of the fine art student in the context of public accountability of higher education, with specific reference to the Quality Assurance Agency experience. *Teaching in Higher Education*, 7(2), 215-224. doi: 10.1080/13562510220124277
- Johnson, W. (2014). Undergraduate Perceptions of Music Degree Program Value, Pertaining to Future Careers. (Electronic Thesis or Dissertation). Retrieved from <https://etd.ohiolink.edu/>

- Jørgensen, H. (2010). Higher music education institutions: A neglected area for research? *Bulletin of the Council for Research in Music Education* (186), 67-80. doi: 10.2307/41110435
- Kemp, I. J., & Seagraves, L. (1995). Transferable skills—can higher education deliver? *Studies in Higher Education*, 20(3), 315-328. doi: 10.1080/03075079512331381585
- Kennedy, J., Tepper, S., & Lambert, A. D. (2010, September). *An analysis of mode effects in three survey modes in the Strategic National Arts Alumni Project*. Paper presented at the 2nd International Workshop on Internet Survey Methods, Daejeon, South Korea.
- Kerr, D., & Knight, B. A. (2011). Analysing the effects of an industry-based jazz education performance training programme on the development of adjunct-professional skills. *Music Education Research*, 13(3), 327-341. doi: 10.1080/14613808.2011.603045
- Koops, L. H. (2008). Using a musicianship portfolio as assessment of music and education course objectives in a "Music for Elementary Teachers" course. *Journal of Music Teacher Education*, 18(1), 39-54. doi: 10.1177/1057083708323144
- Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Association of American Colleges and Universities. Retrieved from [https://keycenter.unca.edu/sites/default/files/aacu\\_high\\_impact\\_2008\\_final.pdf](https://keycenter.unca.edu/sites/default/files/aacu_high_impact_2008_final.pdf)
- Kuh, G. D. & Ewell, P. T. (2010). The state of learning outcomes assessment in the United States. *Higher Education Management and Policy*, 22(1), 1-20. doi: 10.1787/hemp-22-5ks5dlhqbfr1
- Kuh, G. D. & O'Donnell, K. (2013). *Ensuring quality & taking high-impact practices to scale*. Washington, DC: Association of American Colleges and Universities.
- Laing, J., Swayer, R., & Noble, J. (1989). Accuracy of self-reported activities and accomplishments of college-bound seniors. *Journal of College Student Development*, 29(4), 362-368.
- Lalasz, C. B., Doane, M. J., Springer, V. A., & Dahir, V. B. (2014). Examining the effect of prenotification postcards on online survey response rate in a university graduate sample. *Survey Practice*, 7(3). Retrieved from <http://www.surveypactice.org/index.php/SurveyPractice/article/view/244>
- Lambert, A. D., & Miller, A. L. (2014). Lower response rates on alumni surveys might not mean lower response representativeness. *Educational Research Quarterly*, 37(3), 38-51.
- Lent, R., & Hackett, G. (1987). Career self-efficacy: Empirical status and future directions. *Journal of Vocational Behavior*, 30, 347-382.

- Maguire, C., Mishook, J., Garcia, I., & de Gaillande, G. (2013). Creating multiple pathways in the arts: A New York City case study. *Internal Journal of Education & the Arts*, 14(10), 1-35. Retrieved from <http://www.ijea.org/v14n10/>
- Miksza, P., & Hime, L. (2016). Undergraduate music program alumni's career path, retrospective institutional satisfaction, and financial status. *Arts Education Policy Review*, 116(4), 1-13. doi: 10.1080/10632913.2014.945628
- Miller, A. L. (2012). Investigating social desirability bias in student self-report surveys. *Educational Research Quarterly*, 36(1), 30-47.
- Miller, A. L., & Dumford, A. D. (2015). The influence of institutional experiences on the development of creative thinking in arts alumni. *Studies in Art Education*, 56(2), 168-182.
- Miller, A. L., Dumford, A. D., Gaskill, S., Houghton, R., & Tepper, S. J. (2016). *To be or not to be (an arts major): Career aspirations and perceived skills of graduating seniors across multiple disciplines* (SNAAP Special Report for the National Endowment for the Arts). Bloomington, IN: Center for Postsecondary Research, Indiana University, School of Education. Available online: <https://www.arts.gov/sites/default/files/Research-Art-Works-Indiana.pdf>
- Miller, K., & Sharkness, J. (2015, May). *Getting a high-stakes alumni survey off the ground*. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, Colorado.
- Millican, J. (2008). A new framework for music education knowledge and skill. *Journal of Music Teacher Education*, 18(1), 67-78. doi: 10.1177/1057083708323146
- Mok, O. N. A. (2010). Diasporic Chinese Xianshi musicians: Impact of enculturation and learning on values relating to music and music-making. *International Journal of Education & the Arts*, 12(1), 1-22. Retrieved from <http://www.ijea.org/v12n1/>
- National Association of Schools of Music. (2016). *Standards and guidelines: Handbook 2016-17*. Reston, VA: National Association of Schools of Music. Retrieved from [https://nasm.arts-accredit.org/wp-content/uploads/sites/2/2015/11/NASM\\_HANDBOOK\\_2016-17.pdf](https://nasm.arts-accredit.org/wp-content/uploads/sites/2/2015/11/NASM_HANDBOOK_2016-17.pdf)
- Nielsen, S. G. (2004). Strategies and self-efficacy beliefs in instrumental and vocal individual practice: A study of students in higher music education. *Psychology of Music*, 32(4), 418-431. doi: 10.1177/0305735604046099
- Pace, C. R. (1985). *The credibility of student self-reports*. Los Angeles: The Center for the Study of Evaluation, Graduate School of Education, University of California at Los Angeles.

- Pascarella, E. T., Wang, J. S., Trolan, T. L. & Blaich, C. (2013). How the instructional and learning environments of liberal arts colleges enhance cognitive development. *Higher Education*, 66(5), 569-583. doi: 10.1007/s10734-013-9622-z
- Pike, G. R. (1995). The relationship between self-reports of college experiences and achievement test scores. *Research in Higher Education*, 36(1), 1-22. doi: 10.1007/BF02207764
- Rowley, J. L. (2012). Final year music students' identities: Music student or music teacher? *Victorian Journal of Music Education* (1), 22-33. doi: 10.1177/02557614111433720
- Salisbury, M., Dyer, K., Trolan, T., & Archibald, G. (2015, May). *Rethinking alumni research: Applying a Life Course Theory framework*. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, Colorado.
- Sandeen, C. (2012). High-impact educational practices: What we can learn from the traditional undergraduate setting. *Continuing Higher Education Review*, 76, 81-89. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1000654.pdf>
- Scott, S. J. (2012). Rethinking the roles of assessment in music education. *Music Educators Journal*, 98(3), 31-35. doi: 10.1177/00274321111434742
- Sheldon, D. A. (2005). Comparisons of higher-order thinking skills among prospective freshmen and upper-level preservice music education majors. *Journal of Research in Music Education*, 53(1), 40-50. doi: 10.1177/002242940505300104
- Skillrud, K., Chirsty, J., Johnson, G., Dunbar, M., & Hotchkiss, N. (2015, May). *Diverse approaches to using alumni survey data*. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, Colorado.
- Smilde, R. (2008). Lifelong learners in music; research into musicians' biographical learning. *International Journal of Community Music*, 1(2), 243-252. doi: 10.1386/ijcm.1.2.243\_1
- Smith, K., & Bers, T. (1987). Improving alumni survey response rates: An experiment and cost-benefit analysis. *Research in Higher Education*, 27(3), 218-225. doi: 10.1007/BF00991999
- Stasz, C. (1997). Do employers need the skills they want? Evidence from technical work. *Journal of Education and Work*, 10(3), 205-223. doi: 10.1080/1363908970100301
- Stasz, C. (2001). Assessing skills for work: Two perspectives. *Oxford Economic Papers*, 3, 385-405. doi: 10.1093/oep/53.3.385
- Tait, H., & Godfrey, H. (1999). Defining and assessing competence in generic skills. *Quality in Higher Education*, 5(3), 245-253. doi: 10.1080/1353832990050306

Thomson, K. (2013). Roles, revenue, and responsibilities: The changing nature of being a working musician. *Work and Occupations*, 40(4), 514-525. doi: 10.1177/0730888413504208

Wharton, B., & Craft-Morgan, S. (2015, May). *High profile reporting of low response surveys: Interpreting alumni surveys*. Paper presented at the Annual Forum of the Association for Institutional Research, Denver, Colorado.

\*Note: Two of the three authors are current or former research scientists working for SNAAP, and played a role in item development, survey administration, data management, and institutional report creation for the project. This provided access to the full data set as well as extensive knowledge of the most appropriate ways in which to analyze the data. However, the research questions and analysis included in this study are independent of any financial or project-based obligations. The third author was a content collaborator for the study and did not access the data set itself, only the results of the analysis.

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