

Desert Skies Symposium on Research in Music Education 2017 Abstracts

PAPER SESSION 1

Up You Mighty Artists, You Can What You Create: Elma Lewis and Her School of Fine Arts

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Music education research occurs in a myriad of circumstances: some studies take place in middle-America during the school day while others are scheduled outside of this setting, some engage time-honored themes, such as the acquisition of technical prowess, while others hone-in on present-day topics, such as pedagogy imbedded with concerns for social justice. In a similar vein, examinations concerned with music education philosophy can intentionally support established conventions, unwittingly propagate oppressive dynamics, or purposefully reposition dominant and/or subverted narratives. If current music education research seeks relevancy and genuine impact our scholarship must include attention to Black students. Contemporary inquiry focused on African Americans' greatest cohort, the urban community, will gain credibility when it layers pedagogy delivered in multiple inner-city settings with the liberating philosophies of esteemed local pedagogues.

Critical race theory (CRT) provides the framework for this paper¹. Employing Ladson-Billings' and Tate's proposition that race "continues to be a significant factor in determining inequity in the United States,"² I engage CRT's use of storytelling, critique of liberalism and White privilege, and underscoring of the impact of multiple forms of oppression in this paper's discussion of music education philosophy and racial pride and equity for African Americans.

The objectives of my research were threefold. I documented the philosophy of Elma Lewis, founder of Boston's Elma Lewis School of Fine Arts, National Center of Afro-American Artists, and Museum of the National Center of Afro-American Artists, positioned her views in relationship to the ideals of Marcus Garvey, and catalogued Lewis' use of the arts and arts education as tools for achieving racial pride and equity for African Americans.

My methodology for this historical case study included review of related literature as well as examination of primary and secondary sources. Primary sources included archival artifacts, interviews, Internet documents, and films. Secondary sources included

¹. Ladson-Billings, Gloria, and IV, William F. Tate. "Toward a Critical Race Theory of Education." *Teachers College Record* (Teachers College, Columbia University) 1, no. Fall (1995): 47-68; Ladson-Billings, Gloria J. "Preparing Teachers for Diverse Student Populations: A Critical Race Theory Perspective." *Review of Research in Education* (American Educational Research Association) 24 (1999): 211-247.

². Ladson-Billings and Tate, *Toward a Critical Race Theory of Education*, 48.

third-party interviews, conversations with long-time African American members of Boston's arts community, and articles from peer-reviewed journals. I employed digital-age and 20th century tools to provide the study's data. A multi-tiered approach to data collection, including Internet searches, preliminary interviews, and preliminary archival study combined with focusing my attention on topics that were prominent in Lewis' writings guided my evaluation and prioritization of source materials. Additional source materials illuminating Garvey's views were drawn from the leader's writings, authoritative biographies, and peer-reviewed journal articles.

The purpose of this paper is to share findings from my study that illuminate key relationships between contemporary music education practice and effective arts education for Black students. Of import are resonances and dissonances between Lewis' philosophy, the music education as aesthetic education (MEAE) perspective, and the music education as activity (MEA) paradigm. I assert that Lewis advanced a philosophy of Arts Education as Cultural Emancipation (AECE) and locate her views within contemporary music education scholarship's models of culturally oriented teaching and African centered pedagogy. I conclude with an analysis of Lewis' AECE philosophy, noting its significance and effectiveness for teaching and learning in both diverse and traditional music education populations.

Works Cited

- Ladson-Billings, G. J. (1999). Preparing Teachers for Diverse Student Populations: A Critical Race Theory Perspective. *Review of Research in Education*, 24, 211-247.
- Ladson-Billings, G., & Tate, I. W. (1995). Toward a Critical Race Theory of Education. *Teachers College Record*, 1 (Fall), 47-68.

Effects of a Straw Phonation Protocol on Acoustic and Perceptual Measures of a Male Barbershop Chorus

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Many voice professionals use semi-occluded vocal tract (SOVT) exercises to promote efficient voicing from their students or choristers. These techniques include such common exercises as lip or tongue trills and vocalizing through straws (i.e., straw phonation). Researchers have found that SOVT exercises create an impedance in the vocal tract that can reduce the breath pressure needed to initiate voicing (Titze, 2006) and decrease vocal fold contact time (Guzman et al., 2013) while increasing overall sound pressure level (Dargin & Searl, 2015) and upper harmonic energy related to singer's/speaker's formant clustering (i.e., vocal "ring," Guzman et al., 2013). Researchers have argued that these differences indicate increased singer "vocal economy" (Guzman et al., 2013), allowing similar or increased vocal output with decreased effort and fatigue.

Until recently, research on SOVT exercises has been limited to studies with individual singers. Much singing instruction, however, takes place in group settings in which choristers may employ different vocal techniques or resonance strategies (Ford, 2003). These techniques are related to unconscious adjustments based on the ability to

hear one's own voice within a group (Ternstrom, 2003). Therefore, the results of studies with individual singers may not directly apply to choruses.

Researchers have investigated SOVT exercises in choral settings in two recent studies. In one study (Authors), an SATB chorus performed two contrasting Renaissance pieces (up-tempo and slower) prior to and after engaging in a straw phonation protocol. Long-term average spectrum (LTAS) analyses, which provide objective acoustical measurement of choral timbre, revealed statistically significant boosts across the entire spectrum of .32 and .20 dB, respectively, after the straw protocol. In another study (Authors) with a more experienced university choir, straw protocols did not evoke statistically significant boosts in the spectrum at the beginning of the rehearsal but did at the end of the rehearsal (.10 dB). Most choristers also reported that the group sounded better (78.3%) and that they individually sang more efficiently/comfortably (73.9%) after the protocol.

Though these boosts do not reflect noticeable differences in vocal sound (i.e., at least 1 dB change, Howard & Angus, 2006), they do represent statistically significant increases with perceptions of improved sound and vocal efficiency. Therefore, they appear to align with findings in the solo singing literature that SOVT exercises can increase "vocal economy." Researchers have recommended follow-up studies with varied choruses and styles to test the consistency of these findings. To that end, the purpose of the present study was to measure the effect of a group straw phonation protocol on acoustic and perceptual changes of conglomerate, choral sound in a male barbershop chorus.

Singers (N = 17) constituted a volunteer, community-based barbershop chorus, age 36 to 94. The group performed "Take Me Out to the Ballgame," a memorized piece from their recurring performance repertoire, while following a pre-recorded conductor to ensure consistent visual stimuli. They then participated in a 4-minute straw phonation protocol with a small stirring straw (2.5 mm diameter opening) before singing the piece again. The protocol was based on an easily accessible YouTube video created by the National Center of Voice and Speech (Jmostrem, 2009). Following the protocols, choristers completed a survey designed to gather their perceptions about the overall choral sound and their own singing efficiency/comfort before and after the straw protocols. LTAS analyses provided acoustic data for pre- and posttest comparisons.

Results indicated a statistically significant .99 dB boost in overall spectral energy. This boost was 1.24 dB in the 2-4 kHz region, the frequencies in which the human ear is most sensitive (Fletcher & Munson, 1933). These increases essentially met or exceeded the 1 dB threshold, meaning that differences were perceivable. Most singers (n = 12, 70.6%) believed the chorus sounded better and that they sang more efficiently/comfortably (n = 10, 58.8%) after the straw phonation protocol. By contrast, 6 (35.3%) felt they sang more efficiently/comfortably prior to the protocol.

In each of the three studies utilizing straw phonation in choral settings, the ensemble evidenced significant boosts to the overall spectrum, indicating increased volume. In the two studies with follow-up surveys, the majority of the singers felt the chorus sang better and that they individually sang more efficiently/comfortably after the protocols. These data align with the studies of individual singers suggesting that SOVT protocols may evoke "vocal efficiency and economy (more loudness without an increase of vocal loading due to increased vocal fold collision)" (Guzman et al., 2013, p. e31-e32). Results

may indicate that SOVT exercises can serve as a simple pedagogical intervention that increases chorister vocal efficiency without detriments to the overall choral sound. Therefore, choral teacher-conductors and those who prepare pre-service educators may wish to utilize straw phonation techniques in their warm-up procedures. The result may be fewer instances of vocal fatigue and damage, enabling healthy and expressive music making for longer periods of time.

References

- Dargin, T. C., & Searl, J. (2015). Semi-occluded vocal tract exercises: Aerodynamic and electroglottographic measurements in singers. *Journal of Voice, 29*, 155-164.
- Fletcher, H., & Munson, W. A. (1933). Loudness, its definition, measurement and calculation. *Journal of the Acoustical Society of America, 5*, 82-108.
- Ford, J. K. (2003). Preference for strong or weak singer's formant resonance in choral tone quality. *International Journal of Research in Choral Singing, 1*(1), 29-47.
- Guzman, M., Laukkanen, A. M., Krupa, P., Horáček, J., Švec, J. G., & Geneid, A. (2013). Vocal tract and glottal function during and after vocal exercising with resonance tube and straw. *Journal of Voice, 27*(4), 523.e19-523.e34.
- Howard, D. M., & Angus, J. (2006). *Acoustics and psychoacoustics* (3rd ed.). Amsterdam, the Netherlands: Focal Press.
- Ternström, S. (2003). Choir acoustics: An overview of research published to date. *International Journal of Research in Choral Singing, 1*(1), 3-12.
- Titze, I. R. (2006). Voice training and therapy with a semi-occluded vocal tract: Rationale and scientific underpinnings. *Journal of Speech, Language, and Hearing Research, 49*, 448-459.

The Role of Classroom Observation in Pre-Service Music Teacher Socialization

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Classroom observations and field-teaching experiences are common practices in music teacher preparation programs. The 2015-2016 Handbook of the National Association of Schools of Music (2015) states that institutions should encourage observation and teaching experiences prior to formal admission to the teacher education program and that, ideally, such opportunities should be provided in actual school situations. While researchers studying early field experiences in pre-service music teacher education have examined pre-service teachers' perspectives (Butler, 2001; Warren, 2001; Conway, 2002; McDowell, 2007; Powell, 2011), student teacher readiness and performance (Fant, 1996; Hourigan & Scheib, 2009), and music teacher identity development (Paul, 1998; Conkling, 2004; Haston & Russell, 2012), research exploring the role and processes of classroom observations may inform music teacher educators in their work with preservice music teachers.

Despite being a common element of introductory music education and methods courses, there is little research to date that examines the role of classroom observations in pre-service music teacher socialization or the processes by which observation is

incorporated into said courses. “Teacher socialization” describes the formation of teaching perspectives and approaches as a result of influence from any individual, group, or institution (Lortie, 2002) and has become widely studied in the context of all disciplines of teacher education, including music teacher education (Roberts, 2000; Bouij, 2004; Scheib, 2007; Isbell, 2008). In her evaluation of a music teacher preparation program, Conway (2002) found that, although pre-service fieldwork surfaced as one of the most valuable aspects of teacher preparation, participants identified early observations without context, specifically a lack of direction as to how the pre-service teachers should focus their observing, as lacking value.

Ten years later, Conway (2012) examined the reflections of experienced teachers, who were the pre-service teacher participants in the previous study, and the issue of observation without context surfaced again as a theme; Conway expressed the need for research focus on classroom observations as a part of pre-service music teacher socialization. Powell (2011) stated that research examining observation methods and sequencing would be especially valuable to understanding pre-service music teachers’ skill development. The need for continuing research focused on classroom observations in pre-service music teacher education is acknowledged in past literature (Ballantyne & Packer, 2004; Brophy, 2002; Conway 2012; Powell 2011), but classroom observation has yet to be investigated in depth aside from its connection to field-teaching experiences. Further, numerous studies have both explored and suggested models for field-teaching experiences (Teachout, 1997; Isbell 2008; Pence & McGillivray, 2008; Hixon & So, 2009; Powell, 2014), while observation methods and sequencing within coursework remain relatively unexamined.

The purpose of this study is to explore the role of classroom observations in the socialization of pre-service music teachers enrolled in an introductory music education course at a large midwestern university. The research questions guiding this study are:

1. In what ways, if any, do pre-service music teachers’ perceptions of teaching change as a result of completing several classroom observations over the course of a semester?
2. In what ways, if any, do pre-service music teachers’ perceptions of student behaviors (in the context of a music classroom) change as a result of completing multiple classroom observations over the course of a semester?
3. What do pre-service music teachers find most valuable about classroom observations required for the course? And, conversely, least valuable?

Data collection will be complete in mid-December 2016 at the conclusion of the fall semester. A phenomenological framework will be used to examine the experiences of the participants: three undergraduate music education students, each with a choral/vocal concentration. According to Patton (2002), the foundational question of phenomenology is, “What is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people” (p. 104)? Through the stages of phenomenological inquiry as defined by Edmund Husserl (1933/1973), I will attempt to capture the “meaning, structure, and essence” of the participants’ experiences observing an elementary general music classroom over the course of a semester.

This study follows a particularistic case study design, in which I “focus on a particular situation, event, program, or phenomenon” (Merriam, 1998, p.29). The phenomenon in question is the music classroom observation experience of the participants as part of an introductory music education course. As a participant observer

both in the course and during the music classroom observations, I have established rapport with the participants. Data include semi-structured interviews (Merriam, 1998) with the participants, participants' written notes during the observation, participants' postobservation reflections, and the researcher's observations of the participants during the music classroom observations. It is the researcher's hope that this study will contribute to the body of work that informs music teacher educators in their preparation of pre-service music teachers.

References

- Ballantyne, J., & Packer, J. (2004). Effectiveness of preservice music teacher education programs: Perceptions of early-career music teachers. *Music Education Research, 6*(3), 299-312.
- Bouij, C. (2004). Two theoretical perspectives on the socialization of music teachers. [Electronic version]. *Action, Criticism, and Theory for Music Education, 3*(3), 1-9. Retrieved 13 September, 2016, from <http://mas.siue.edu/ACT/v3/Bouij04.pdf>
- Brophy, T. S. (2002). Teacher reflections on undergraduate music education. *Journal of Music Teacher Education, 12*(1), 10-16.
- Butler, A. (2001). Preservice music teachers' conceptions of teaching effectiveness, microteaching experiences, and teaching performance. *Journal of Research in Music Education, 49*(3), 258.
- Conkling, S. W. (2004). Music teacher practice and identity in professional development partnerships. *Action, Criticism, and Theory for Music Education, 3*(3), 1-15.
- Conway, C. M. (2002). Perceptions of beginning teachers, their mentors, and administrators regarding preservice music teacher preparation. *Journal of Research in Music Education, 50*(1), 20-36.
- Conway, C. M. (2012). Ten years later: Teachers reflect on "Perceptions of Beginning Teachers, Their Mentors, and Administrator Regarding Preservice Music Teacher Preparation." *Journal of Research in Music Education, 60*(3), 324-338.
- Fant, G. R. (1996). An investigation of the relationships between undergraduate music education students' early field experience and student teaching performance. Unpublished doctoral dissertation, University of Arizona, Tucson, AZ.
- Haston, W., & Russell, J. A. (2012). Turning into teachers: Influences of authentic context learning experiences on occupational identity development of preservice music teachers. *Journal of Research in Music Education, 59*(4), 369-392.
- Hixon, E., & So, H. J. (2009). Technology's Role in Field Experiences for Preservice Teacher Training. *Educational Technology & Society, 12*(4), 294-304.
- Hourigan, R. M., & Scheib, J. W. (2009). Inside and outside the undergraduate music education curriculum: student teacher perceptions of the value of skills, abilities, and understandings. *Journal of Music Teacher Education, 18*(2), 48-61.
- Husserl, E. (1973). *Cartesian meditations: An introduction to phenomenology* (D. Cairns, Trans.). The Hague, Netherlands: Martinus Nijhoff. (Original work published 1933)
- Isbell, D. S. (2008). Musicians and teachers: The socialization and occupational identity of preservice music teachers. *Journal of Research in Music Education, 56*(2), 162-178.
- Lortie, D. C. (2002). *Schoolteacher: A sociological study* (2nd ed.). Chicago: University of Chicago Press.

- McDowell, C. (2007). Are they ready to student teach? Reflections from 10 music education majors concerning their three semesters of field experience. *Journal of Music Teacher Education*, 16(2), 45-60.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- National Association of Schools of Music. (2015). Handbook 2015–2016. Reston, VA: Author.
- Paul, S. (1998). The effects of peer teaching experiences on the professional teacher role development of undergraduate instrumental music education majors. *Bulletin of the Council for Research in Music Education*, 137, 73-92.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Pence, H. M., & Macgillivray, I. K. (2008). The impact of an international field experience on preservice teachers. *Teaching and Teacher Education*, 24(1), 14-25.
- Powell, S. R. (2011). Examining preservice music teachers' perceptions of initial peer-and field-teaching experiences. *Journal of Music Teacher Education*, 21(1), 11–26.
- Powell, S. R. (2014). Examining preservice music teacher concerns in peer-and field teaching settings. *Journal of Research in Music Education*, 61(4), 361-378.
- Roberts B. A. (2000). The sociologist's snare: Identity construction and socialization in music. *International Journal of Music Education*, 35, 54-58.
- Scheib, J. W. (2007). Professional-identity needs of instrumental music educators: An examination of music teacher socialization, identity construction, and career expectations. IMTE 2nd Biennial Colloquium, May 17-20, 2007.
- Schwartz, H. (1996). The changing nature of teacher education. In J. Sikula, T. J. Buttery, & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed.) (pp. 2-13). New York: Macmillan.
- Teachout, D. J. (1997). Preservice and experienced teachers' opinions of skills and behaviors important to successful music teaching. *Journal of Research in Music Education*, 45(1), 41-50.
- Warren, H. (2001). Music teacher education and the professional development school. *Journal of Music Teacher Education*, 10(2), 23.

Delivering a More Global Music Curriculum: Challenges in Canada and China

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Music educators are continually looking for ways to provide global music experiences for their students. Whether driven by the increasing diversity of students, curricular mandates or societal initiatives, many educators around the world find teaching globally a challenge. The purpose of this study was to investigate how elementary music educators in Edmonton, Alberta, Canada and Shouguang, Shandong, China, two cities

with very different populations and music education curricula, negotiate the challenges of delivering a global music curriculum to their public school students.

In Canada, each province is responsible for curriculum development resulting in educational experiences that can vary greatly across the country. The last K-12 music curriculum in Alberta was published in 1989 at a time when issues of diversity or globalization were not prominent in educational thought. While curricular updates have occurred in other subject areas within Alberta since that time (Social Studies in 2005), and other provinces like Manitoba have new music curriculum (2011), what Alberta's children are expected to know and be able to do in music remains firmly in the 20th century.

While curricula differ from province to province, the diverse make-up of students attending school is a national phenomenon. The changing immigration patterns in Canada have resulted in a large increase of visible minorities in Canada: coming primarily from Asia and the Middle East. Overwhelmingly, Canadian immigrants have chosen to settle in the urban centres of Ontario, British Columbia, Alberta and Quebec (Troper, 2013). Alberta's elementary music teachers are expected to provide musical experiences that are diverse in content and perspectives to the children they are teaching, however, their outdated music curriculum and many professional learning experiences do not address this diversity. How does a teacher's background, professional education, music and pedagogical skills and access to personal, print and audio resources impact their ability to bring a more globalized musical education to their increasingly diverse students?

Music education in China has had a rich and varied history. From Confucian teaching, to music education promoting the values of the Communist party of China, to the "dynamics between local nationalism and globalization" (Law and Ho, 2009, p. 508), music teachers in China are faced with challenges and tensions in their teaching practices. In China, there is a national curriculum that is used across the country. The Ministry of Education sets the curriculum and even provides textbooks for use by teachers across the country. In 2001 the Ministry of Education brought forward new mandates to the curriculum to include *suzhi jiaoyu*. This term "encompasses a range of educational ideals, but generally refers to a more holistic style of education which centres on the whole person" (Della-Iacovo, 2008, p. 241).

This is in contrast to the deeply entrenched examination-oriented education system that has been part of Chinese culture and history (Della-Iacovo, 2008). Part of these changes involved bringing more world musics into the national music curriculum standards (Ho and Law, 2004). These mandates from the Ministry of Education were piloted for a period of ten years and in 2011 (Law, 2014, p. 344) were published with implementation in schools in 2012. With the changing face of society in China, the tensions between *suzhi jiaoyu* and examination-oriented education systems, the need to promote values education, and arequirement to offer global music experiences to a school age population that is more than 90% of one ethnic group (Han), many music teachers face a reality with which they are not equipped to deal.

The objectives of this research were to: explore the current teaching practice in general, and specifically regarding the inclusion of global content and perspectives of elementary music teachers in Shandong and Alberta; explore how elementary teachers' early music experiences and their teacher preparation programs hinder or advance the mandates with which they are charged; and to identify challenges in teaching a more

global music curriculum and potential professional learning experiences in this area that would best serve teachers in Alberta and Shandong.

Data for this comparative study was collected via semi-structured face-to-face interviews with four elementary music educators from Edmonton, Alberta, Canada and via Skype interviews with four elementary music educators from Shouguang, Shandong, China. The Shandong interviews were conducted in Mandarin with the use of a translator. They took place in Alberta and were verified by the participants with the interviewer and translator in Shandong a few months later. Interviews were recorded, transcribed and analyzed seeking common themes. Results from these interviews and implications for music educators will be presented.

Band Enrollment and High School Graduation Rates

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Recent Department of Education data has shown that students with the highest standardized test scores are more likely to be involved in extracurricular activities (Kronholtz, 2012). Similarly, it was found that students who participated in extracurricular activities had a lower dropout rate than their peers who were not involved in extracurricular activities (Mahoney & Cairns, 1997). As schools encounter budget cuts and are faced with hard decisions on which programs to keep, research on the importance of music education is imperative. Although the number of fine arts classes offered at a school was not found to have an effect on graduation rate (Lovett, 2015), band was found to increase a school's sense of community and have a positive effect on peer relationships (Marasco, 2011). In 2008, Jones observed students involved in music had significantly higher test scores than their non-music peers. Likewise, Estrand (2015) found that high school band students had significantly higher GPAs and test scores on the PLAN and ACT than their peers who were not enrolled in band.

Although many studies have investigated the effect of music and band enrollment on higher GPAs and test scores, little research has examined the effect that band enrolment has on graduation rates. Therefore, this pilot study investigated the relationship between band enrollment and graduation rate. High school band directors from the southeast (N = 52) were surveyed on the number of seniors they had enrolled in band at the end of the 2014-2015 school year, what percentage of the seniors enrolled in band graduated on time, and the name of the school at which they taught. The researcher used the provided school name on the state Department of Education website to acquire the school's average graduation rate, free and reduced lunch program rate, and teacher to student ratio. To determine possible relationships, a Pearson Correlation Coefficient was calculated for each variable. For the purpose of this study, "band senior graduation rate" was defined as the percentage of seniors enrolled in band at the end of the school year that graduated on time. "School graduation rate" was defined as the percentage of seniors enrolled in the school that graduated on time.

Of the 52 band directors interviewed, all reported the band senior graduation rate was higher than their school's graduation rate. In most cases, there was a large difference between the overall school graduation rate and the band senior graduation rate, with some

differences being extreme (e.g., overall school average graduation rate = 63.3%, while the band senior graduation rate = 100%). Specifically, the band senior graduation rate ranged from 92.3%-100% with an average band senior graduation rate of 99.5%, while the overall school graduation rate ranged from 63.3%-99.4%, with a school average graduation rate of 85.2%. However, although the band graduation rate was consistently higher than the school graduation rate, the school graduation rate was not found to have any relationship to the band graduation rate ($r = -.081$).

Results indicated a moderate negative relationship between school graduation rate and percentage of students eligible for free and reduced lunch ($r = -.513$); however, some anomalies were found. For example, the school with the highest percentage of students eligible for free and reduced lunch had one of the highest graduation rates (e.g., free and reduced lunch = 84%, while the school graduation rate = 93.7%), while a school with one of the lowest free and reduced lunch percentages also had one of the lowest graduation rates (e.g., free and reduced lunch = 44%, while the school graduation rate = 74.1%). Likewise, the student to teacher ratio had a very weak positive relationship with graduation rate ($r = .103$). Because of this, it was not deemed as a cause for higher or lower graduation rates. One school with a student to teacher ratio of 15:1 had a school graduation rate of 99.4%, whereas, another school with a similar student to teacher ratio of 16:1 had a graduation rate of 63.3%. Similarly, the school with the highest student to teacher ratio of 24:1 had one of the highest school graduation rates of 91.2%. Further results on all discussed correlations will be detailed in corresponding tables.

The only factor observed that had a large relationship to a higher graduation rate was student enrollment in band. In this study, the average graduation rate among band seniors was always higher than the average graduation rate of the school that they attended. Because this was a pilot study, further research will investigate possible factors that could explain why the seniors enrolled in band in this study have a higher graduation rate than the graduation rate of their school.

References

- Edstrand, C. S. (2015). A comparative analysis of students' involved and not involved in high school band and academic achievement (Doctoral Dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3702597)
- Jones, C. T. (2008). Balancing the scales of music: A quantitative study of music education and academic achievement in a southeastern state public school district (Doctoral Dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3316418)
- Kronholz, J. (2012). Academic value of non-academics: The case for keeping extracurriculars. *Education Digest: Essential Readings Condensed for Quick Review*, 77(8), 4–10.
- Lovett Jr., A. (2015). The relationships among the fine arts, school culture, and high school graduation rates in Georgia. Retrieved from ERIC database. (ED557020)
- Mahoney, J. L., & Cairns, R. B. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology*, 33(2), 241–253. doi: 10.1037/0012-1649.33.2.241
- Marasco, K. (2011). Creating school communities through music. Retrieved from ERIC database. (ED519171)