Texas Music Education Research

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A Gender Analysis of Texas University Interscholastic League Band Concert and Sight Reading Evaluation Adjudication Panels from 2010-2019

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The purpose of this study was to determine the male-female ratio of band directors serving on adjudication panels for Texas University Interscholastic League (UIL) concert and sight reading evaluations from 2010-2019. The Texas Music Forms database was used to access a list of UIL band concert and sight reading adjudicators from across the state from 2010-2019. Adjudicator panels were analyzed by gender, region, grade level (middle school and high school), and type of evaluation. Results indicate that the average percentage of female UIL band adjudicators hired between 2010 and 2019 was 16.6%, and there were 5.5% more female judges in 2019 than in 2010. When the number of women who served on multiple panels during a given year is considered, the actual number of females who were hired between 2010 and 2019 decreases anywhere from 43.7% to 58.16% annually. Of the 1,482 combined concert and sight reading evaluation panels from 2010-2019, only 3 (.2%) were all-female, while 639 (43.1%) of the combined panels were all-male, and 840 (56.7%) of the combined panels were mixed gender. The data show that the largest concentration of female adjudicators (27.24%) served on middle school panels, whereas only 8.4% of high school panels were female, and 9.8% of combined middle and high school panels were female. While the percentage of females serving on UIL band adjudication panels has slowly risen over the past decade, they continue to be noticeably underrepresented. Further research on the gender of band adjudicators in other states with a similar evaluation process could be conducted to determine if this issue is national in scope.

Prior to the 1980s, there was a clear distinction between gender roles in the United States. Many members of society viewed gender categorization as fundamental and enduring, as characterized by the separation of work into two categories: women's and men's (West & Zimmerman, 1987). These gender roles, though not as strictly defined today, are still found in all aspects of our society. Although strides have been made towards gender equality, gender bias still exists (Morgenroth & Ryan, 2018). While women continue to make inroads in various career fields that have been traditionally dominated by men, gender ratios remain skewed in favor of males (Morgenroth & Ryan, 2018). The field of instrumental music education provides an excellent example of persistent gender inequity (Gould, 2003).

Gender and Musical Instruments

Gender bias in instrumental music is evident from the very beginning when an instrument choice is made. Abeles and Porter (1978) found widespread musical instrument gender association among their test subjects, who ranged from kindergarten-aged children to adults. The researchers found that flute, clarinet, and violin were thought to be more feminine instruments, and trumpet, trombone, and drums were considered more masculine. Additional research conducted by Abeles (2009) in 1993 and 2007, revealed little difference in the distribution of instruments according to gender. Girls still favored the flute, clarinet, and violin, and boys still predominantly chose the trumpet, trombone, and drums.

Sinsel, Dixon, and Bades-Zeller's (1997) study focused on fourth and fifth graders who were asked to rank the psychological gender, as opposed to biological gender, preference for instruments. The results showed that students who identified with a masculine sex type preferred masculine-stereotyped instruments, students who identified with a feminine sex type preferred feminine-stereotyped instruments, and the students who did not identify as male or female preferred neutral instruments. The instruments that were considered feminine were flute, oboe, and clarinet, and the masculine instruments were drums, trombone, and tuba. There were no string instruments in this study because orchestras were not traditionally offered at the participating schools.

Gender in Musical Careers

A study of the number of males and females enrolled in high school choir, band, and orchestra in the United States from 1982-2009 showed that, across all three ensembles, females outnumbered males in enrollment (Elpus, 2015). While Elpus's study indicated females constitute a majority of players in secondary instrumental music ensembles, Sheldon and Hartly (2012) and Gould (2003) found an unequal representation of secondary female instrumental ensemble directors in music education.

The small number of female band directors can partially be attributed to the fact that band was originally a military organization from which women were excluded (Greaves-Spurgeon, 1998). While women were not allowed to play in the military bands, an all-female version of the military bands was established in 1951, but was deactivated only 10 years later. The disbanded women were not allowed to join any of the existing military bands at that time because they were limited to males (Nichols, 2015). The male-only standard continued when the military band model was adopted for high school, which means that in the early history of high school band, women were not allowed to participate (Sears, 2010). Sears (2010) explained that the masculine history of the profession has resulted in fewer women holding positions as band directors. She cited the struggle to balance work and family as another reason for the gender disparity. Fitzpatrick (2013) maintained that it can be difficult for a mother to work as a high school band director because of the large time commitment that the job requires. She went on to explain that time constraints create moments where the director has to make a choice about priorities, and that is not always an easy decision to make, especially when it involves children.

Jagow (1998) noted that the biased attitude towards women in music is shifting slowly, resulting in gradual positive changes, despite women being involved in making and conducting music for centuries. Jagow went on to offer several possible reasons why female conductors are in the minority, including the lack of female applicants, discrimination towards females in their role as mother, and the perception that women are too weak, emotional, and sensitive to perform the duties associated with directing an ensemble.

Gender in Adjudication

In Leimer's (2012) study of the gender makeup of the band adjudication panels in the state of Florida in comparison with the overall gender ratios of band directors in the state, she discovered considerable differences in the number of male and female directors hired to judge Music Performance Assessment (MPA) events. The overall percentage of female high school band directors in Florida was 18.66%, while the percentage of females hired to judge the marching band competition was only 7.89%. In the 10-year span of the study, a female adjudicator was only hired

once to judge the state marching band MPA (Leimer, 2012).

Given the fact that women were excluded from participation in band programs until the middle of the 20th century, female band directors have faced many obstacles to acquire positions and to become recognized as an equal to their male counterparts (Gould, 2003). Once women band directors are hired, they must continue to fight for acceptance, particularly in the areas of leadership and adjudication (Sheldon & Hartley, 2012).

The purpose of this study was to determine the male-female ratio of band directors serving on adjudication panels for Texas University Interscholastic League (UIL) concert and sight reading evaluations from 2010-2019. The research question posed: Is there any difference in numbers of men and women serving on UIL band concert and sight reading adjudication panels?

Method

TMAA Membership

The 2019 Texas Music Adjudicators Association (TMAA) concert band active and provisional membership lists were downloaded from the TMAA database (txmaa.org). TMAA does not maintain an archive of membership from previous years, so 2019 was the only year available for analysis. The name of each member on the concert band lists was entered on a spreadsheet categorized by gender. When the gender of a member came into question, school district websites and an internet search engine (www.google.com) were used to ascertain gender by analyzing school district directories, articles, and photo captions for identifying pronouns. A positive gender identification was made for every member of the TMAA concert band lists. This spreadsheet was also used as a reference for determining the gender of UIL judging panels obtained from the Texas Music Forms database.

UIL Band Concert and Sight Reading Adjudication Panels

The Texas Music Forms database is the online database that UIL uses to post contest data. This database houses 18 years of UIL contest data, which includes adjudication panels, individual school evaluation records, regions, and school director names. The data were incomplete prior to 2010, so only a decade's worth of data was available to be recorded from this website. Individual regions house the remainder of the evaluation data, but many regions do not keep accurate databases on their websites and the frequent turnover of region secretaries precludes access to the required information. While two regions (1 and 7) had incomplete data posted on their websites for the 10 years the study encompassed, I was able to retrieve Region 1's records from their website archives and the Region 7 secretary emailed me a complete list of adjudicators for the requisite time period.

The Texas Music Forms database was used to create a list of every judge serving on adjudication panels for UIL band concert and sight reading evaluations held in every region across the state from 2010-2019. School names and corresponding scores, director information, and other information included in the UIL database were not analyzed in this study. The TMAA membership spreadsheet was used as a resource to ascertain the gender of each adjudicator listed. The earlier the contest occurred, the less likely the judges were to be found on the TMAA membership spreadsheet, thus necessitating an internet search to identify the gender of an adjudicator. All adjudicators' genders were positively identified through a secondary search using an online search engine, school district directories, articles, and photo captions.

A UIL adjudication spreadsheet was used to log the gender breakdown of the panels,

categorized by year, grade level (middle school or high school), type of evaluation (concert or sight reading), region, and the number of females that served on each panel. The name of each female judge was recorded, along with a tally of the number of times her name appeared. Several regions used the same judging panels for different UIL evaluation days. Each evaluation day was counted as a separate event because the UIL form was listed separately and different groups were evaluated. Between the 2016 and 2017 school year, UIL regions shifted and five regions were added. The number of regions went from 28 to 33, which caused some shifts in data reporting. Thus, more evaluations were added and analyzed for the last three years of the study. In addition, because all the data used in this study are publicly available, no IRB review was necessary.

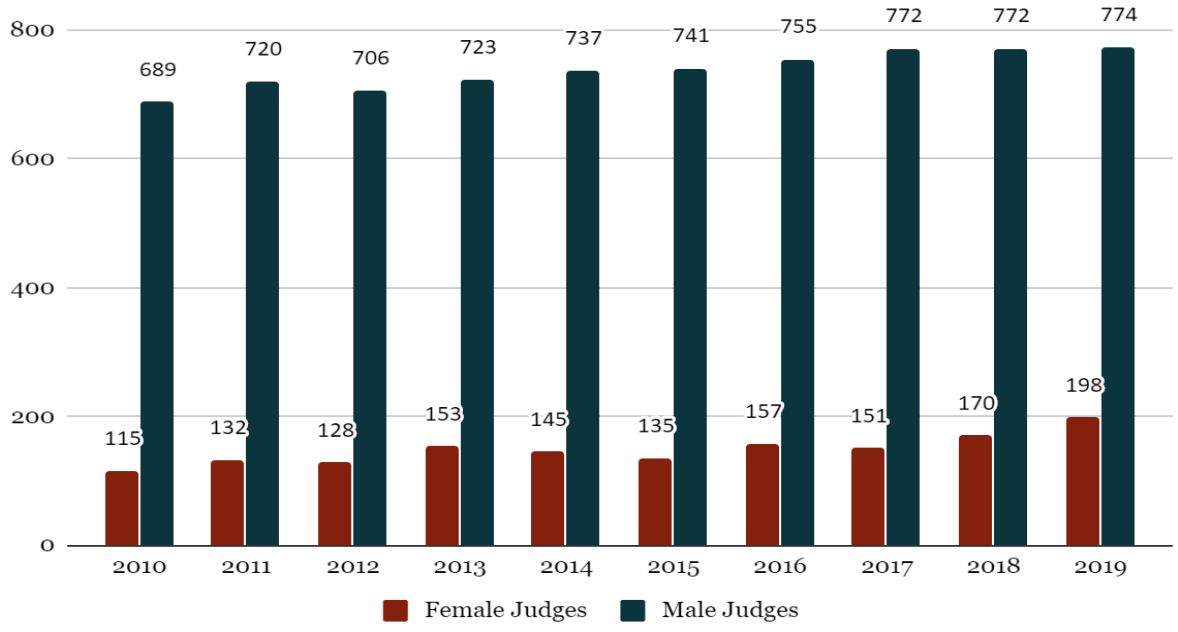
Results

Gender of Adjudicators

Data taken from the Texas Music Forms website for each band concert and sight reading panel from 2010-2019 were analyzed for gender. Results revealed that the average percentage of female UIL band adjudicators hired between 2010 and 2019 was 16.6%, and the average percentage of male adjudicators was 83.4% (see Figure 1). From year to year, the percentage of female adjudicators fluctuated by one to two percent and there were 5.5% more female judges in 2019 than in 2010. In 2019, the percentage of female judges was 19.95% and was the highest percentage of the decade.

Figure 1

Number of female and male UIL band concert and sight reading adjudicators hired 2010-2019



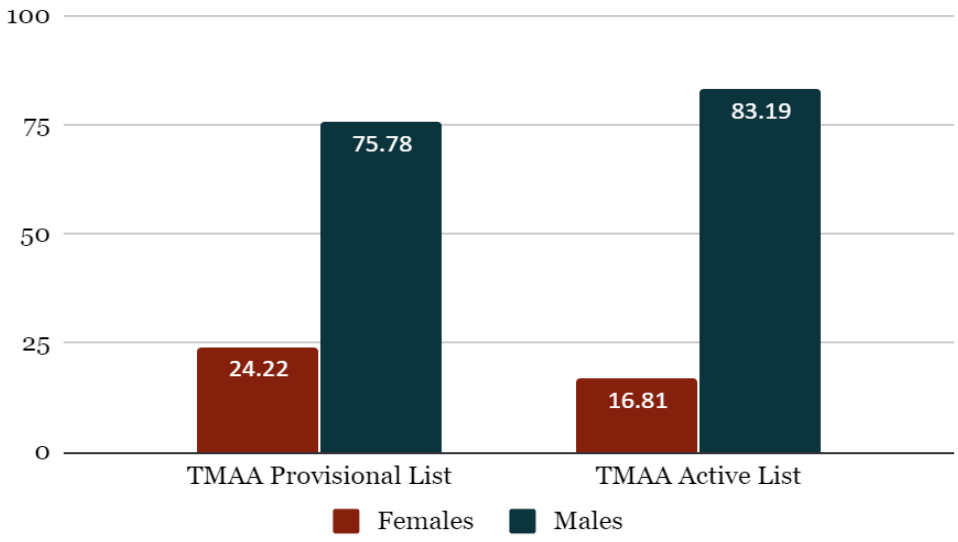
TMAA Active and Provisional Lists

The active and provisional lists were retrieved from the TMAA website and analyzed for gender for 2019 (see Figure 2). The results indicate that in 2019, 16.8% of the band directors on the TMAA

active list were female and 24.2% of the directors on the provisional list were female. There is a 7.4% difference in the number of females on the TMAA active list and the provisional list. The average number of women on the combined TMAA lists was 20.5% with the average number of males being 79.5%. Male members of TMAA made up 83.2% of the active list and 75.8% of the provisional list.

Figure 2

Percentage of male and females on the 2019 TMAA active and provisional lists for band concert and sight reading evaluation

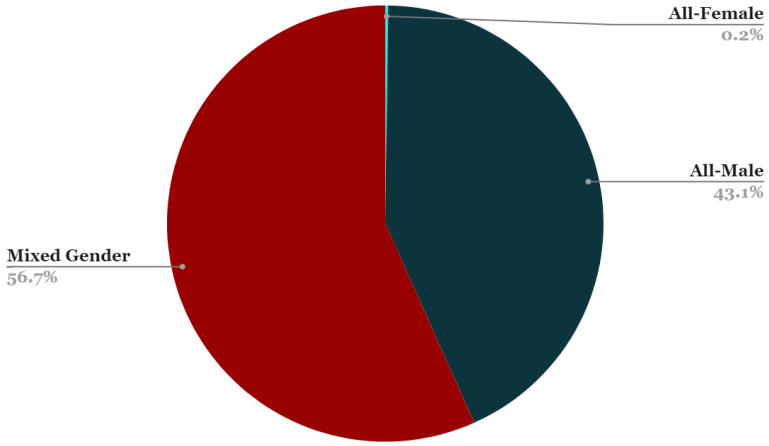


Adjudication Panels

The gender makeup of each combined adjudication panel, which includes both concert and sight reading evaluations, was analyzed and separated into three categories—all-male, all-female, and mixed gender. Of the 1,482 combined concert and sight reading evaluation panels from 2010-2019, only 3 (.2%) were all-female, while 639 (43.1%) of the combined panels were all-male and 840 (56.7%) combined panels were mixed gender (see Figure 3).

Figure 3

Percentage of all-male, all-female, and mixed gender adjudication panels in combined UIL band concert and sight reading evaluations from 2010-2019



The judging panels were then divided into two categories, concert evaluation and sight reading evaluation. An analysis of the 1,482 concert panels revealed that 13 (.9%) were all-female, 919 (62.01%) were all-male, and 550 (37.1%) were mixed gender adjudication panels (see Figure 4). A similar distribution of percentages was evident in the 1,482 sight reading panels—23 (1.5%) all-female, 916 (61.8%) all-male, and 543 (36.6%) mixed gender (see Figure 5).

Grade Level Differences

Figure 4

Percentage of all-male, all-female, and mixed gender adjudication panels in UIL band concert evaluations from 2010-2019

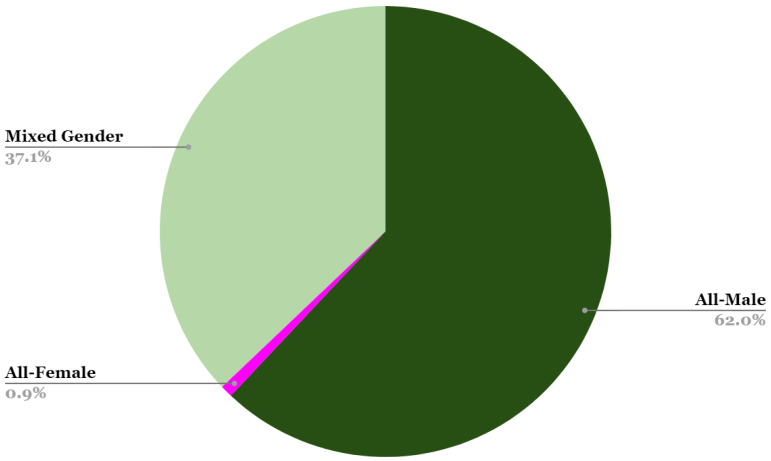
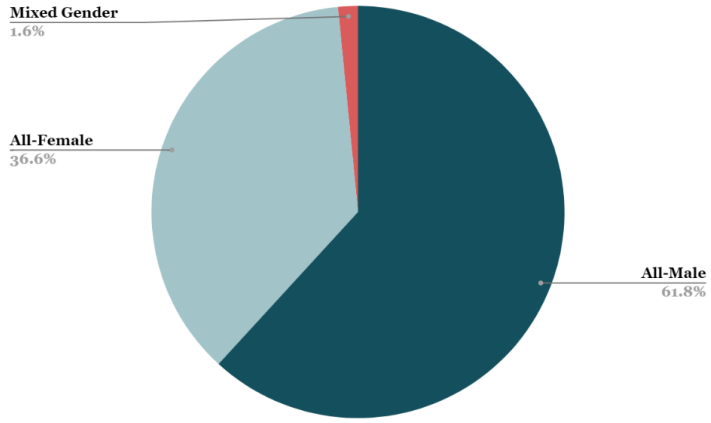


Figure 5

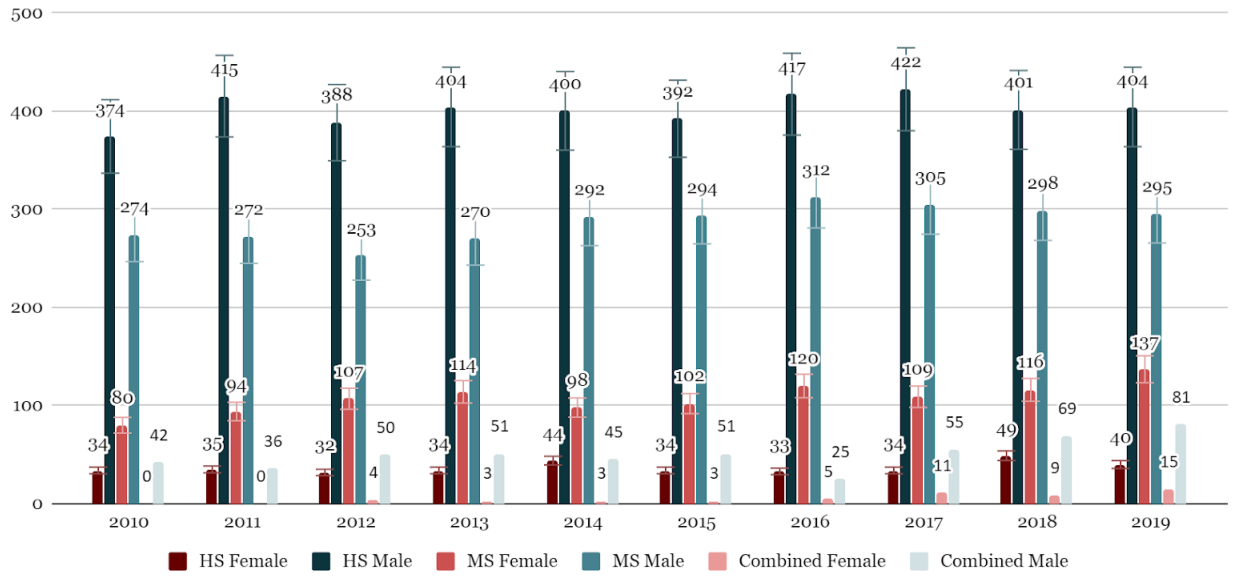
Percentage of same-gender and mixed gender adjudication panels in UIL band sight reading evaluations from 2010-2019



The concert and sight reading evaluations varied slightly from region to region in the grade levels of schools included. Some regions chose to separate high school and middle school evaluations while other regions combined the two. Thus, the three school categories used in this study are middle school, high school, and combined school. The data show that the overall average of female middle school adjudicators was 27.2%, female high school adjudicators was 8.4%, and female combined middle and high school adjudicators was 9.8% (see Figure 6). In 2010, 8% of the high school adjudicators were female, and by 2019, that number had increased to 11%. On the other hand, in 2010, 22.5% of the middle school adjudicators were female, compared to 31.7% in 2019.

Figure 6

Comparison of gender of adjudicators of UIL band high school, middle school, and combined school concert and sight reading evaluations from 2010-2019



Concert and Sight Reading Panels

The number of females hired to judge the concert or sight reading portion of the evaluation varied each year. The overall percentage of female adjudicators on concert panels was 16.3% (see Figure 7). In 2019, the percentage of female adjudicators on concert panels was 19.7% which was a 3.5% increase from 2010. In 2011, the percentage of female adjudicators on concert panels was 13.6%, which was the lowest of the decade. The overall percentage of female adjudicators on sight reading panels was 16.9% (see Figure 8). The highest percentage of female adjudicators on sight reading panels occurred in 2019 with 20.9% of adjudicators. In 2010, the percentage of female sight reading adjudicators was 12.4%, which is an 8.55% increase in the 10 years under investigation. Between 2010 and 2019, the number of female adjudicators increased by 32.3% in concert evaluations and 51% in sight reading evaluations.

Figure 7

Comparison of gender of adjudicators of UIL band concert evaluations from 2010-2019

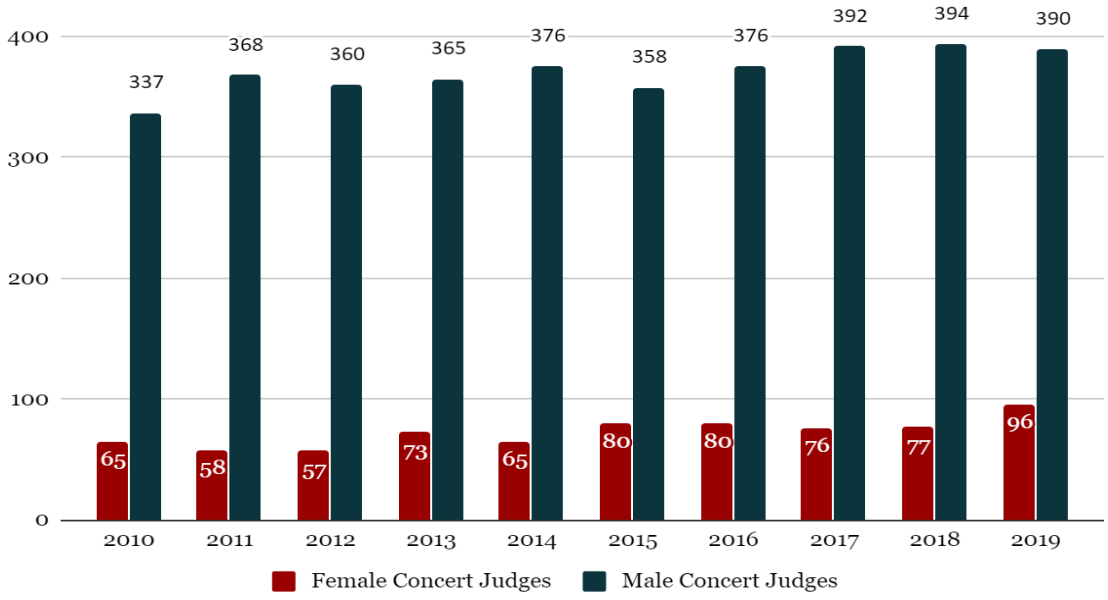
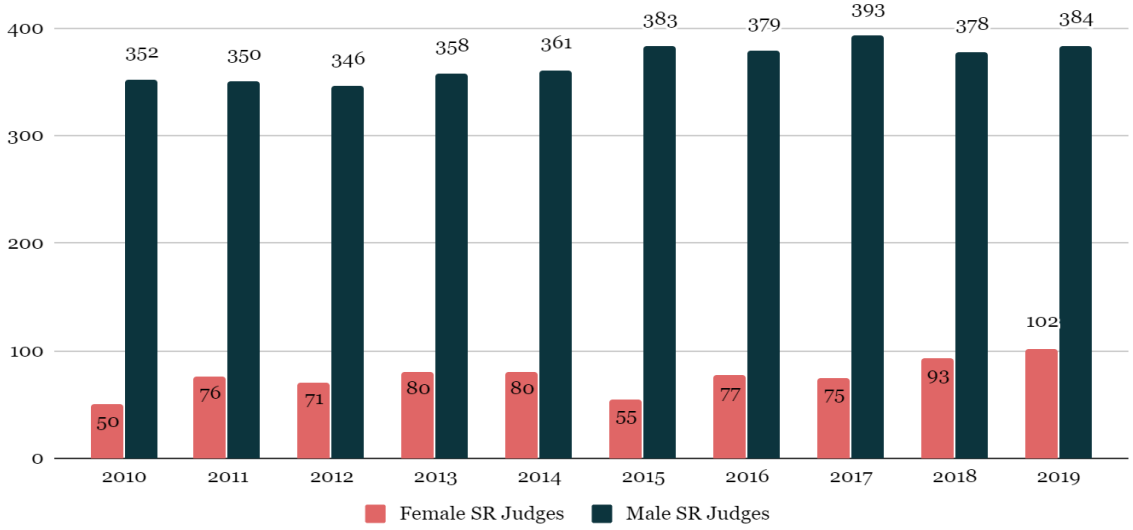


Figure 8

Comparison of gender of adjudicators of UIL band sight reading evaluations from 2010-2019



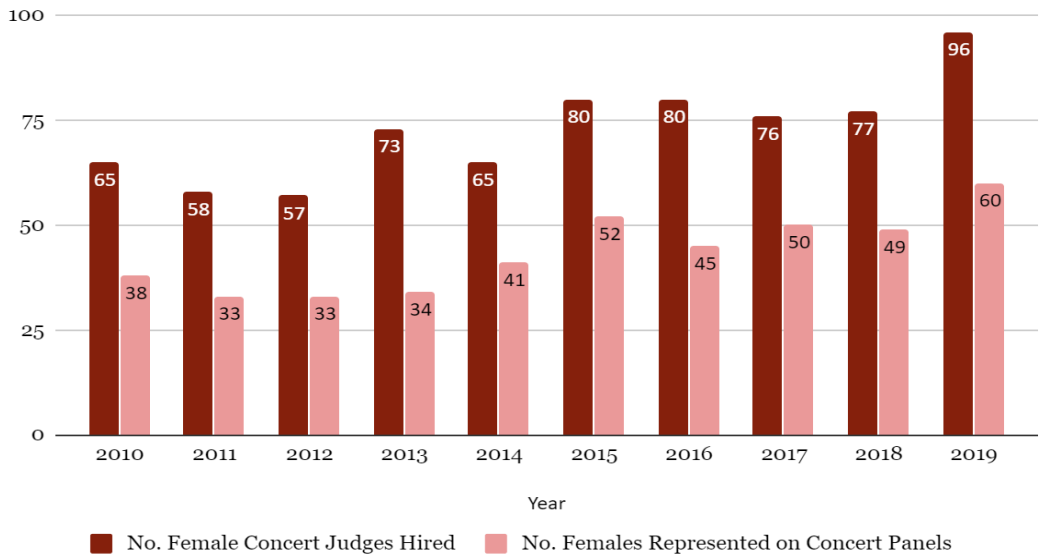
Adjudicator Duplications

An analysis of the UIL concert and sight reading evaluation adjudication panels revealed that some of the female adjudicators were judging multiple times each year. When the names were evaluated, and duplicates were removed, the total number of females represented each year decreased. The overall percentage decrease in the actual number of females hired from 2010 to 2019 was 51.7%. The largest decrease between the number of female judges who were hired to judge and the actual number of females who judged was 58.1% in 2016. The smallest overall decrease in the actual number of female adjudicators, 43.7%, occurred in 2015.

Viewing the data separately for the concert adjudication panels revealed that the overall percentage decrease in the actual number of females hired on concert panels was 40.3% (see Figure 9). The largest decrease in the number of females represented on concert panels occurred in 2013 with a 53.4% decrease. The smallest decrease on concert panels was 34.2%, which occurred in 2017.

Figure 9

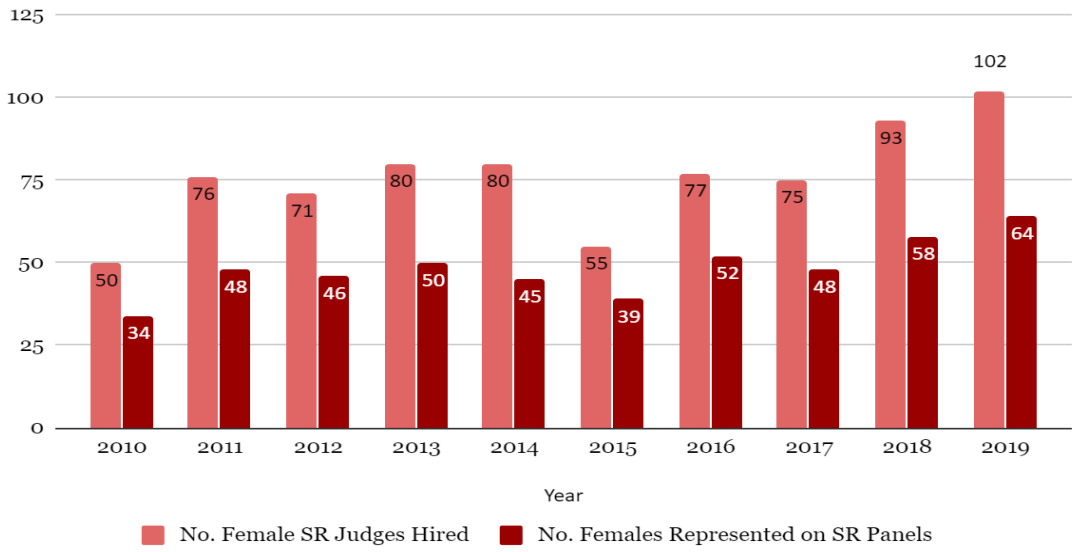
Comparison of number of female judges hired to actual number of female judges represented on UIL band concert panels from 2010-2019



The percentages of decrease were smaller for sight reading panels. The overall percentage decrease in the actual number of females hired on concert panels was 35.7% (see Figure 10). The largest decrease occurred in 2014, with a 43.7% decrease in the actual number of females represented on sight reading panels. The following year, 2015, saw the smallest decrease in the number of female adjudicators on sight reading panels at 29%.

Figure 10

Comparison of number of female judges hired to actual number of female judges represented on UIL band sight reading panels from 2010-2019



Discussion

The purpose of this study was to determine the male-female ratio of band directors serving on adjudication panels for Texas UIL concert and sight reading evaluation for the past decade. The ratio was compared to the current gender makeup of the Texas Music Adjudicators Association (TMAA) provisional and active lists for band. Further, the gender disbursement of adjudication panels was examined in terms of geographic location, grade level, and type of event.

The gender analysis of the TMAA lists showed that there was a 7.4% difference in the percentage of females on the active list compared to the provisional list. The number of females on the provisional list, which exceeds the active list in membership, perhaps is an indication of an increase in female band directors, as well as their interest in serving as adjudicators. Because archived membership lists are unavailable, it is not possible to examine the number of females on the active or provisional lists from year to year to ascertain the rate of growth. It is interesting to note that the average percentage of women on the TMAA active and provisional lists (20.5%) was very close to the percentage of women who are hired to judge UIL evaluations in 2019 (19.9%). This might suggest that an increase in women on the TMAA lists would result in a higher percentage of women serving on UIL evaluation panels. A longitudinal study comparing the percentage of females on the TMAA lists and the percentage of females hired to judge UIL evaluations would reveal if there is a positive correlation between the two variables.

The overall gender makeup of adjudication panels (i.e., all-male, all-female, mixed gender) revealed the lowest percentages of females in the data reported. Due to the limited number of women on the TMAA list, it is difficult to fill adjudication panels solely with females. As previous studies indicate, secondary female instrumental ensemble directors are in the minority (Gould, 2003; Sheldon & Hartly, 2012); thus, the potential number of women to apply for TMAA membership and serve on UIL band adjudication panels is limited. Perhaps this is the reason why only .2% of the combined adjudication panels (including both concert and sight reading evaluations for a total of six judges) were all-female. When adjudication panels were viewed separately for each evaluation (requiring three judges per panel), the percentage of females was higher—.9% for concert panels and 1.5% for sight reading panels. Due to the narrow pool of female adjudicators, it is understandable that it would be more difficult to fill the concert and sight reading panel at a single contest with women.

The majority (56.7%) of the combined concert and sight reading adjudication panels were mixed gender. However, an examination of the individual evaluations indicated that all-male panels were more common, with 62.0% in concert and 61.8% in sight reading. The prevalence of male judges is supported by Leimer's (2012) study which revealed that 92% of Florida marching band adjudicators were male. The larger number of males on the TMAA list accounts for the higher probability that the panels would be all-male. Perhaps greater gender parity could be achieved by instituting a requirement on the region level that adjudication panels should be mixed gender. That would also provide more opportunities for females to judge.

The UIL makes changes to their athletic, academic, and arts regions every two years in order to adjust for school enrollment, decline, and new schools. In 2017, five new regions were created, resulting in many changes to school district's region assignments across the state. Thus, analyzing regions for trends in the gender makeup of adjudication panels proved difficult. One trend that was apparent statewide was the limited number of all-female adjudication panels and the prevalence of all-male adjudication panels. This could be attributed to the larger number of male adjudicators, greater availability of males, or the process regions use to select their judges.

This study also revealed that there was a substantial difference in the number of females hired

for high school and middle school band evaluations. The fact that more females were hired to judge middle school band evaluations can be attributed to the fact that there are more female band directors who teach middle school than high school. Previous research indicates that fewer women serve as high school directors due to challenge of balancing job demands and family responsibilities (Fitzpatrick, 2013). The analysis also determined that the percentage of total female adjudicators in band UIL concert and sight reading evaluations fluctuated by one to two percent from year to year. There were 5.5% more female judges in 2019 than in 2010, which indicates a small, positive trend towards more female adjudicators.

A comparison of the percentage of female adjudicators in concert vs. sight reading evaluation reveals little variance with 19.7% on concert panels and 16.9% on sight reading panels. The negligible difference (2.8%) between the number of women hired for concert vs. sight reading panels, seems to indicate that there was no preference regarding which evaluation women adjudicated. While the number of female adjudicators hired increased by 32.3% in concert evaluations and 51% in sight reading evaluations from 2010-2019, there were fluctuations in the percentages of females vs. males from year to year and no discernable patterns could be found.

It became apparent, while doing the initial analysis, that there were duplications in the names of the female judges. Upon further analysis, it was determined that the number of females hired was around 50% less than the actual number of females represented. Some women were hired multiple times per year, serving on a range of 2 to 8 adjudication panels per year. A profile of the women who are hired repeatedly could provide greater insight into what characteristics a region is seeking when hiring adjudicators for UIL evaluation panels.

Further Research

The focus of this study was gender representation on UIL concert and sight reading adjudication panels. A similar study of UIL marching band contests could provide additional data on the gender composition of adjudication panels. This study could also be extended to other states with a similar evaluation process to determine if the issue is national in scope. Further research on the gender of band directors in Texas would provide a measuring stick to determine if the percentage of female adjudicators is in alignment with the percentage of female band directors.

The key to having more females hired to judge UIL band evaluations could be the number of women who apply for and maintain TMAA membership. Further studies on the number of females who apply for membership into TMAA, as well as females who are placed on the provisional list, but never advance to the active list, could give some insight into why there are so few women represented on UIL adjudication panels. Finally, a thorough study into the process that each region uses to choose UIL evaluation adjudication panels could provide greater understanding as to why so many adjudication panels are predominantly male.

Conclusion

While the percentage of females serving on UIL band adjudication panels has slowly risen over the past decade, they continue to be noticeably underrepresented. Female band adjudicators remain in the minority, regardless of grade level, geographic location, or type of contest. It is my hope that raising awareness of the inequitable distribution of females on UIL adjudication panels will encourage more regions to hire women with greater frequency to serve as band adjudicators.

Keywords

Gender; band, UIL; adjudication; concert; sight reading

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Instrumentalists in Vocal Methods: Analysis of Student-identified Transfers Between Instrumental and Vocal Strategies

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University of Texas at Arlington

> Jake Wallace is a newly certified All-Level Music teacher who has recently graduated from Thompson College. He has just completed his first interview for the band director position at Eleanor Roosevelt High School. Jake waits pensively for the call. The call comes. "Mr. Wallace? *Yes sir*. I want to offer you the position here at Eleanor Roosevelt High School. *Thank you so very much, I accept*. There is one more thing. *Yes?* Our choral director just left, and due to numbers, we are unable to hire another person. We will need you to direct the choir as well. Is that a problem? You did say that you had some vocal training, and you **are** all-area certified in music…"

It is both exciting and nerve-racking, especially as a new teacher, when being offered a new professional position. They hope for the perfect place to connect and influence future students, often with dreams of emulating the beautiful music made with their teachers. As it should be, the desire for success is strong. However, a flood of questions often accompanies these aspirations. Is it the right job? Will I be able to connect with these students? What happens if I get offered a position, and I'm not sure I can completely handle all the associated responsibilities? Will I get offered another job if I don't take this one? The scenario above, asking a novice teacher with an instrumental background to also teach choir, is not a fictional tale. As I began my new position as a teacher educator at a southeastern higher education institution, I was almost immediately approached by two music education graduates with an emphasis in instrumental music, asking for guidance in their new jobs as choral directors. More recently, six of the last eight graduates with an emphasis in instrumental music are now teaching some form of the choir. Of these graduates, three are starting elementary choir programs, two are teaching middle school choir and band, and one is preparing to teach high choir and band.

School administrators are challenged with hiring the right people and implementing certain curricular elements to ensure student success. A school's success can take many forms; however, states often define schools' success based on test results of core curricular areas. The administration strives to be a good steward of funds, and funding in the areas tested by the state is ofteen more of a focus than non-tested areas, with music not typically being one of those areas. Therefore, the justification for funding of the non-testing curricula becomes a bit more of a challenge (Beveridge, 2010). Taking this into consideration, school principals can feel justified in hiring one teacher to cover both the instrumental and choral programs.

Music educator preparation curricula have been studied by several researchers (Killian, Dye & Wayman, 2013; Raiber & Teachout, 2014; Thornton, Murphy & Hamilton, 2004). Preservice educators complete a unique curriculum to meet the requirements of their institution based on the guidelines for teacher certification set by the state education association. Many of the states in North America certify their music education teachers as All-Area (band, choral, and orchestral), All-Level (Pre-K-12 grades). Therefore, newly certified teachers should technically be able to teach

any music class at any level (Henry, 2005). Because of this type of certification, principals can feel justified in hiring one instructor to teach both instrumental and vocal areas. On the surface, to a non-musician, this can sound like a good use of funds, but may not equate to a thriving music classroom experience for the students or the teacher.

Lennon and Geoffrey (2012) alluded to the challenges of communication between the public schools and higher education as to the desired curricula for the preservice teacher in meeting the needs of programs inclusive of both instrumental and vocal under the supervision of one instructor. The current curricular design typically focuses on an area of emphasis, instrumental or vocal, with supplemental classes in the other area as programmed according to their institution degree plan (Greher & Tobin, 2006). Preservice music educators spend several semesters on their primary instruments (including voice) and are often evaluated on them to assure their mastery (Bergee, 1988; Ciorba & Smith, 2009; Zdzinski & Barnes, 2002). The vocal and choral opportunities commonly provided to many preservice music educators with an instrumental emphasis consist of a possible vocal methods course, maybe a choral group opportunity, and perhaps some overlap of information in elementary and secondary methods (Lennon & Geoffrey, 2012). Often the same type of evaluation emphasis is not given in their areas of non-emphasis (Austin, 2016; Cooper, 1994; NASM, 2003). Therefore, this curricular design, may not be the best for preservice music educators needing to teach in both the instrumental and vocal areas, or instrumentalists who wish to teach general music (Robinson, 2010; Shouldice, 2017).

Burwell (2006) compared teaching approaches of instrumental and vocal instructors and found differences in time spent on technique and musical interpretation. Instrumental teachers spent more time on artistic interpretation, and choral teachers spent more time on technique. Despite the identification of different teaching approaches, this study does not provide information about their experiences in cross-curricular teaching (instrumentalists teaching choir and vocalists teaching an instrumental ensemble). Integrated teaching approaches within music have also been studied, but not exhaustively, and primarily from the perspective of using voice as a tool to enhance learning in an instrumental ensemble (Burton, 2005; Krubsack, 2006; Robinson, 1996). As early as 1946, Van Sickle proposed playing instruments first and then making the transition to voice. Rohwer (2009) found that singing parts before playing to be a very effective strategy in teaching middle school band and a senior citizen band. Moore, Chen, and Brotons (2004) found it useful to combine the efforts of playing instruments and singing at the upper elementary level.

Howard, Swanson, and Campbell (2013) explored the needs of both the preservice educator and the school by observing six students as they transitioned through their programs to student teaching. They concluded that the preservice education students were meeting more of the emotional and community-building needs of the students but were not as successful in meeting the curricular needs; and therefore, identified a need to revisit the curricula in place for the teacher education programs. Davis (2011) concurred, supporting the need for more considerable attention to the delivery of instruction and classroom management. Haddon (2009) concluded those learning to teach effectively do best by practicing teaching in authentic contexts. It is through these authentic experiences that preservice teachers learn to problem solve and think quickly on their feet. Additional studies have explored the growth of preservice and inservice teachers as they progress through their teaching experiences (Burwell, 2006; Killian, Dye, & Wayman, 2013). It is through these experiences that educators learn how to transfer their knowledge into actual teaching (Daniels, 2001; McKeough, Lupart, & Marini, 1995); however, most are from the perspective of their primary teaching area.

Instrumentalists, for the most part, are preparing to teach band or orchestra, not preparing to

teach choir (Franklin, 1971; Raybould & Feldpausch, 2008). Recent music education graduates with instrumental emphasis are being challenged by school principals to teach beyond their area of expertise. This trend is more prominent in rural areas (Hunt, 2009; Isbell, 2005). In several personal encounters at different music educator conferences and when presenting professional developments, both preservice and inservice educators have stated how unprepared they feel about teaching musical skills outside their area of emphasis. Although an element of cross-curriculum teaching is occurring with utilizing vocal techniques to enhance instrumental ensemble outcomes, the reverse role of using instrumental knowledge to help teach vocal techniques seems to be missing in the research. Also, research on the transfers that instrumentalists make from their background knowledge to the voice seems to be limited. Therefore, in efforts to bridge this gap, the purpose of this study was to explore the transfers made by preservice music educators with an instrumental emphasis when working on vocal literature in a vocal methods course. The following questions guided the study:

1. What reflections do instrumentalists make when practicing vocal repertoire?
2. What reflection do instrumentalists make when practicing their vocal repertoire on their primary instrument?
3. What transfers do instrumentalists make between their instrumental background/primary instrument and their voice when practicing their vocal repertoire?

Method

Participants

The participants (N = 32) were undergraduate preservice music educators with an instrumental emphasis. The participants were either enrolled at a large tier-one institution (n = 18) or a small liberal arts institution (n = 14) in the southeastern region of the United States. The instructor, also serving as the researcher, taught all involved courses. Their primary instruments of the students consisted of brass (n = 13), woodwinds (n = 10), piano (n = 4), percussion (n = 4), and strings (n = 1).

Course Design

The vocal methods course was designed to meet the choral and vocal needs of preservice music educators with an instrumental background. Previously at these institutions, the course was taught in a class-voice setting focusing primarily on solo vocal literature. Due to the new curricular design and early-career teaching opportunity, the instructor collected data to analyze the overall effectiveness of the course. The new course design was divided into three different sections: (I) middle school choral and high school choral (7 weeks), (II) solo literature (4 weeks), and (III) solo literature coaching (4 weeks). Placing group singing first was purposeful to help establish a higher level of comfort for novice singers (Killian & Wayman, 2010). Price (1992) conveyed students were more successful in making transfers of pedagogical knowledge when applying them to individuals. As the instrumental students progressed through each section, they were encouraged to compare the vocal components and the instrumental counterparts (Davis, 2011; Schmidt, 2010; Scott, 2010). Warmups were used as an example with the following questions: How do you warm up in your ensemble? Did you notice any differences when we were going through the warmups for our choral piece? Why do you think the differences exist? Do you think some of the same warmups could be used for both groups? This Socratic method of learning was in efforts to encourage the

students to explore the different components of the class more thoroughly and to make connections between their instrumental experience and their new choral activities.

Data Sources

As part of the curriculum, there were three formal data collection components throughout the course. The course instructor designed the data sources with the influence of research on pedagogical transfer (Geringer & Madsen, 1987; Price, 1992). The first source of data collection was a pre-course survey collected on the first day of class. This survey collected information on instrumentalist's primary instrument and previous vocal experience and emphasized the connections between playing and singing by asking responses to the following three questions:

1. On a scale of 1 (none) to 7 (advanced), please rate your singing ability.
2. Do you think learning different singing techniques will affect the playing of your primary instrument? (Yes/No)
3. Do you think learning different singing techniques will affect the musicianship of your playing? (Yes/No)

The second data source, and the primary focus of this study, was a reflective practice log questionnaire during Section II: Solo Singing. The instrumental students were assigned a strophic solo in a key closely related to their instrument. As a means of encouraging transfers between singing and playing, students alternated between playing a verse and singing a verse. As part of the assignment, the instrumental students were encouraged to practice six days a week for a minimum of fifteen minutes on vocal technique warmups and include three thirty-minute practice sessions focusing on repertoire. The honor system was used, not requiring students to keep a formal record of the times. Students responded once a week and submitted a mixture of typed and hand-written responses to the following four questions.

1. What am I learning about my voice?
2. What am I learning about my instrument?
3. What am I learning about the connection between my voice and my instrument?
4. Anything else?

The third source of data was an end-of-course survey. This survey focused on the student's perceived improvements and consisted of the following three questions:

1. On a scale from 1 (none) to 7 (advanced), please rate your vocal/choral improvement since the class started.
2. What specific areas do you feel you improved?
3. Additional comments?

Data Analysis

The instructor collected the pre-course surveys (n = 32) during the first class of the course. The means and percentages were calculated for the data. The reflective practice log questionnaires were graded for completion during the course (N = 128; n = 4 per student). After the course concluded, names were removed from the data and coded to maintain linear consistency with the individual responses. A team of experts (n = 3) reviewed the comments for emerging themes (Creswell, 2015). The instructor collected the end-of-course surveys on the last day of class (n = 32). The means of the student's self-perceived vocal/choral improvement were calculated, and areas of growth analyzed for emerging themes.

Results

Additional data were collected utilizing three different sources: pre-course-survey, practice log questionnaire, and end-of-course survey. The survey indicated self-perceived vocal ability, and the mean of participants' self-ratings were 3.58 (*SD* = 1.17) on a scale from 1 (none) to 7 (advanced). Sixty-nine percent of the participants stated they believed learning different singing techniques would affect the playing of their primary instrument. Ninety-seven percent of the participants indicated they thought learning different singing techniques would affect the musicianship of their playing.

The reflective practice log questionnaire was the primary source of data for this project. Participants responded weekly to three free-response questions regarding what they learned about their voice, their instrument, and the connection between the two. The researcher analyzed all comments utilizing a general inductive approach (Creswell, 2015). The comments were read multiple times by a team of music educators (n = 3) and then color-coded into the following emerging categories:

Physical – Comments related directly to the function of the body, such as breathing, core support, and placement.

Emotional – Comments related to the emotional connection of the process, such as nervousness, confidence, and comfort levels.

Musicality – Comments related to the musical connection of the performance and/or practice such as dynamics, phrasing, and movement of the line.

Technical/Mental – Comments related to actual connections of the instrument, including the voice, and/or overall "truths" such as alternate fingerings, "…practice helps me," and transpositions.

Several of the participants' comments contained verbiage that would have placed them in more than one category. However, for this study, a dominant category was selected as determined by a consensus of musician researchers (n = 3). The frequency and percentage relationship of comments appear in Table 1.

Table 1

Frequency of Category Mentions in Practice Logs

	Physical	Emotional	Musicality	Technical/Mental	Total Comments	Total %
Voice	95	46	67	0	208	56.37%
Instrument	16	5	6	11	38	10.30%
Connection	59	8	28	28	123	33.33%
Total comments	170	59	101	39	369	
Total %	46.07 %	15.99%	27.37%	10.57%		

Learned about Voice

As the students commented on what they learned about their voice (N = 208), three emerging categories evolved: Physical (n = 95), Emotional (n = 46), and Musicality (n = 67).

Physical

Among all the comments provided by the participants, the physical component of the voice had the most responses. Several of the students commented on the release of tension in the body to obtain freedom in singing. One student stated, "Letting go of the tension in my throat and shoulders when I sing makes it much easier to get a pure, full sound." Students also commented on the need to properly warm up the voice, recognizing "...if you don't warm up, there won't be as much of a response." As the students progressed, there was recognition of different vocal placements and physical-related exercises to help obtain placement. Connections were made, such as "...making the fish face to help everything open up to a better sound." Once students started making the connection of vocal support to the body, they also began to realize, "...there is more power there [the voice] than I give myself credit for!"

Emotional

The emotion category consisted of two opposing reactions, positive or negative. In the beginning stages of singing, a typical response was "...I am uncomfortable with my voice and singing." Some students invested in singing time by including it as a part of everyday happenings. One student shared their value of the ease in finding time to practice and its natural progression.

> "It's much easier to practice singing on the go. I tried just singing in the car, or when working on the computer. I feel like I got much more comfortable and natural. It's like practicing conducting... learn to do it without thinking, so when you think about it, it's even better."

After students started exploring their voice, they often reported small positive observations such as "...having a much larger sound than I give myself credit for...it's exciting!" As they continued to explore, they started setting goals to affect their practice positively. One student expressed, "Now that the technique is more comfortable, I'm settling in and not pushing as much. Yes!" Another student revealed his excitement by acknowledging the accomplishment of the goal of "...my breathing holds a little longer now!"

Musicality

These participants, already accomplished instrumentalists, frequently mentioned aspects of musicality "...I need to work on singing legato, connecting the sections, and not making it blocky." Several of the students also commented on "...needing to think of the forward motion of the line...especially repeated pitches." Students also made comments regarding the body that must be utilized to support the singing voice and would often engage in the extreme like "...using louder dynamics to bring out the air support. Then add softer dynamics back in..."

Learned about Instrument

The curriculum design purposefully required that the instrumentalists first play the assigned vocal repertoire on their primary instruments and then sing. Students commented less on their instrument as compared to their voice, and the connection of their voice and instrument. This is especially true in two of the emerging categories. As the students commented on what they learned about their instrument (N = 38), four emerging categories evolved: Physical (n = 16); Emotional (n = 5); Musicality (n = 6); and Technical/Mental (n = 11).

Physical

Participants frequently mentioned physical comments about their primary instruments, such as "...needing to prepare the body before starting," "making a more conscious effort to play with good posture," and "needing to work on supporting the sound with my whole body." As the students continued to work, they analyzed more specific components of their playing, like "... having a lot of movement in my mouth will make my sound greatly distorted." Students started making more connections between their instrument and voice, such as "...learning how to sing through my horn," as they progressed in the process.

Emotional

Students frequently mentioned confidence. Many of the participants found their instruments to be a safe-haven, or a creature of comfort, as demonstrated by the brass player that finds himself stating, "...really leaning towards playing my trumpet." Other students challenged themselves to go beyond their safety net and explored "the need to play out of the box, ...and not be a control freak."

Musicality

When performing on familiar instruments, students often went quickly from an elemental perspective of "working on the clarity of pitches, and phrasing" to a more global approach such as "...figuring out the best use of vibrato for the style of the piece." Fewer comments were made related to this category by the instrumentalists, possibly because of their shared belief that "...I practice all the time on my instrument and am always trying to musical...it is no different than normal."

Technical/Mental

The technical/mental reflection of what the students learned about their instruments were often observations regarding a simple fix or adjustment. For example, when a flutist realized that she was continually playing sharp, she just pulled out the head joint to adjust for proper intonation. The same occurred when a trombonist realized, "2nd position needs intonation work." Several students mentioned, "some alternate fingerings that kept them more in tune."

Learned – Connection/Transfer

As the students commented on what they learned about the connection between their voice

and their instrument (N = 123), four emerging categories evolved: Physical (n = 59); Emotional (n = 8); Musicality (n = 28); and Technical/Mental (n = 28).

Physical

Exemplars on the physical connections between the instruments and the voice seem best conveyed through the association of the instrumental families. Percussionists, mallet players, in this case, made interesting links to the comparison of wrist positioning and tongue positioning. "When the wrist is bent when playing, it doesn't ring a resonant tone…almost like when my tongue pulls back in the mouth and blocks my singing tone." Percussionists also made the connection of different mallet heads and the elevation of the soft pallet. "It's interesting how similar the liftedness and the type of felts used to damper the sound is to the soft pallet in the sound of the throat."

A clarinetist compared the "voice & reed: vocal folds = reeds. If you overplay your reeds or don't warm them up properly, they die… take care of the tools you need to do well." Several of the saxophone players spoke to the similarities of the registers and the need to "accommodate the transition between them by relaxing the tongue and voicing placement." Brass players made connections as well. For example, a "trombone is literally a giant tuning slide. Although you don't have the same visual representation for the voice, it is very similar. I thought trombone was the only instrument like that." A euphonium player made an internal connection of how "the placement of sound in singing is similar to how I change tone color and resonance on my horn." The pianists made connections about the relaxation of the body and its impact on both their playing and singing. They also spoke on the physical aspect of articulation. "I was told this week by my piano professor that I was playing too legato and needed to have some individual identity to the articulation of the notes but keep slightly connected… the same thing with voice." "My playing and singing greatly improved when I involve the whole body."

Emotional

Confidence played a significant role when speaking to the emotional connections made between singing and playing. The fact the voice is not their main instrument meant many of them were "more nervous singing than playing." Students expressed, "trying to enjoy the experience makes it easier." Ultimately knowing, "confidence is key to success."

Musicality

The students' focus on artistry and musicality became more apparent after their confidence grew in singing. "As I become more musical in my singing, I become more musical in my playing"; therefore, "I need to play/sing stylistically the same." Often, they referenced singing actually to enhance the musicality of their instrumental playing. One student conveyed, "I need to make the legato line in my playing like I do when I sing it." They also noted the commonality in the challenges like "not controlling so much and move through the phrase."

Technical/Mental

The participants found several "truths" that apply to both their voice and their instrument. One such "truth" was "practicing makes both better." One student took this concept one step farther

by stating the realization that "both require focus away from the instrument itself (sing or playing a song) … i.e., technical exercises." Students also noted the common challenge that "it can be difficult to tell what I really sound like when I'm performing…regardless of singing or playing;" and regardless of what way I am performing, "I really have to think about intonation for both." Students self-identified "truths" about the differences between their singing and playing. One "truth" shared was "I can play with a much broader sound on my trombone than I can sing." Another example revealed, "singing and playing the saxophone, although they are similar in a lot of ways, it still takes a different mindset."

End-of-Course Survey Results

The end-of-course survey was the third and final source of data. The survey indicated the participants (N = 32), on a scale from 1 (none) to 7 (advanced), had a self-perceived end-of-course vocal/choral improvement mean of 5.5 (SD = .89). This result does not reflect on the initial pre-course survey question inquiring about rating ones singing ability; however, it is possible the students considered this. One hundred percent of the participants shared that they believed learning different singing techniques affected the playing of their primary instrument. One hundred percent of the participants also concluded learning different singing techniques affected the musicianship of their playing. Areas the participants felt they improved upon were: breath control, phrasing, discovering music motivation, removal of tension, oral shape during singing, intonation, and focus of sound. Additionally, students commented "strengths to help the individual …leading to the improvement of the group," as well as the class teaching them "to think of both as music production rather than voice vs. instrument." Most importantly, students concluded: "feeling like I could lead a choir now!"

Discussion/Teaching Implications

Recent music education graduates with an emphasis on instrumental music are being challenged by school principals to teach beyond their area of expertise, and more specifically, to include the choir. When developing a course and curriculum in an effort to meet the related challenges, the instructor was purposefully open with the students about the problem-solving approach and interest in the collection of information as to the effectiveness of the approach (Davis, 2011). Much to the instructor's surprise, each class appeared to embrace the idea, recognizing this experience as an attempt to find a solution to a genuine challenge directly related to their field. The instructor believed, due to this evidence of student ownership, the idea of collecting information and purposeful reflection not only became welcome but highly desired. This positive demeanor is not to say that all participants initially believed there were transfers to be made between singing and the playing of their instruments, but they were open to exploring.

The primary purpose of this opportunity was to modify an existing course to serve our preservice instrumental music education community better and collect data as to its effectiveness. After the course concluded, exploring the transfers made by instrumental students when working in the vocal methods course became of great interest. They reflected on what they learned about their voice, instrument, and the connection of both (N = 369). Four categories emerged: Physical (n = 170); Emotional (n = 59); Musicality (n = 101); and Technical/Mental (n = 39).

As part of the pre-course survey, participants rated themselves on a scale from 1(none) to 7 (advanced), their initial singing ability (M = 3.58). The end-of-course survey did not ask the same

question, leaving a direct comparison impossible; however, the end-of-course surveys did ask them to rate their vocal/choral growth on the same 7-point scale while in the course (M = 5.50). Although not specific to vocal ability, it indicates a healthy level of growth related to the curriculum, and singing was a significant component of the curriculum. As a result of the post-test survey, the participants indicated perceived areas of self-improvement: breath control, phrasing, discovering music motivation, removal of tension, oral shape, intonation, and focused sound.

Students also made comments on their increased comfort when singing. This increased comfort seemed to transfer into a more successful self-perception of teaching ability in the vocal setting. Having students, both play and sing their repertoire while making purposeful reflective transfers between the two, appeared to be an effective strategy for improving vocal/choral experience among these instrumentalists.

The results of this study can provide insightful transfers related to two areas of teaching. The first is in the field of preservice music educators with an instrumental emphasis. The second area is related to inservice teaching and increasing the success of instrumental students that are also in the choir.

Teacher Preparation Transfers

Teacher educators always strive to empower their future teachers in useful and meaningful ways. Helping students make connections, or transfers, between new information to already acquired knowledge, is one method often utilized (Forrester, 2018; Geringer & Madsen, 1987; Price, 1992). This process does not always occur naturally within the learner when left undirected. This study helped substantiate that purposeful reflection and transfers do enhance the learning process. This method of transferring connections between the playing of the instrument and the relationship of the voice allowed students to take ownership of their learning, and often resulting in unique and insightful perspectives.

The reflection process initially modeled for the students in a group setting helped to minimalize apprehension and maximize collegial support. When students began to show signs of emotional or technical discomfort, the instructor immediately would start asking questions about the connection to their "world." For example, when working on vocal warmups, the instructor would have students analyze the process in which their major ensemble would warm up and compare it to what they were doing vocally. The students were insightful in their transfers. One notable difference observed was not in the type of exercises used, but rather the order of the exercises. Students conveyed that instrumentalists typically start on long tones to work tuning and physically warming up the instruments, as compared to many vocalists usually starting on short tones to engage the body and breathing mechanism and then moving into more extended tones. These group discussions seemed to provide the students with a greater sense of ease when students contributing and assisted them in internalizing the process as a group before doing it individually.

Reid (2001) had very similar findings, noting the variation in the ways that instrumentalist and vocal students experience learning music. She found that less advanced students tended to focus only on the technical or factual components of the experience. Developing students were able to make broader connections to artistic, political, social, and cultural perspectives. Meanwhile, advanced students were able to make connections to the complete musical experience, inclusive of all technical, artistic, political, social, and cultural aspects.

Instrumentalists' comments on their voice were categorized primarily in three areas rather

than four. I believe this is because the student's comments were from a novice perspective. They were trying to figure out the basics of singing and then connecting to their experience with prior knowledge, such as their instrument, musicality, and emotional connections. Also, fewer comments were made related to what they learned about their instruments. Anecdotally, students shared they were already very familiar with their instruments, and therefore, they focused on their voice or the connection between their instrument and the voice.

Inservice Teaching Transfers

Transfers made by instrumentalists were insightful to other instrumentalists and enlightening for choral directors. It is not unusual to have students participate in both instrumental and choral programs; therefore, using the transfers from this study that relates to both fields, could be an additional way to differentiate instruction. These types of transfers might also allow a teacher, particularly those with limited knowledge of instruments, some background information, and an alternate perspective of their students. Although this transfer does not enhance the music directly, it can provide a common avenue of understanding and improve the student and teacher relationship. A strong relationship, one that conveys how teachers care by knowing information relevant to their students, enhances the music-making process. Beyond the transfers gleaned from this project, the method implemented to gain this information, an action research model, serves as a strong example of how to problem solve in a program setting.

Implications for Future Research

This line of research exploring the cross relationships of vocal and instrumental settings are far from exhaustive. Further research is needed in the exploration of job market trends and the call for the "hybrid" music teacher (i.e., instrumentalists teaching choir, and vocalists teaching in instrumental areas). It would also be interesting to explore the scale of the trend related to the instrumentalists teaching both an instrumental ensemble and choir. Is this trend in limited locations, or more global? It could also be fruitful exploring the success rate of those teachers and inquire as to what modification would be suggested to music education preparation curriculum and further empowering future teachers.

Exploration of instrumentalists' success in a choir would also be fascinating, such as what vocal and instrumental transfers are made in a group setting, or how successful they feel as a singer. It could also be insightful to gain students' perspectives into how singing influences their experience when playing in an instrumental ensemble, or if singing in the choir has any influence on their individual playing.

All-area/all-level certified teachers have the opportunity to teach any music class pre-kindergarten through 12th grade. This opportunity is both a blessing and a curse. When asked to teach out of your area of expertise, trust in your strengths. Look to what you know and connect the new experiences with your prior knowledge. Music will always have an interconnected thread. This thread will not only empower you as a musician but an educator.

Keywords

Choral teaching; secondary instruments; singing; teacher preparation; preservice teachers

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The Growth of Music Education Research: TMEA 1978-2020

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As part of the centennial of the Texas Music Educators Association (TMEA), I created a spreadsheet of all research posters listed in TMEA Conference Programs (1981-2020) and manuscripts published in Texas Music Education Research (1978-2018), including 1393 studies by 488 researchers. Factors examined included: growth of the research poster session (11-80 entries per year), research leadership, milestones in Texas research, productivity of researchers based on participation in research poster sessions (1-69 entries per researcher), productivity of affiliated universities involved (state, national and international), and an examination of participants studied, research methodologies employed by decade, and a consideration of research topics chosen then and now with speculation about possible changes in focus over the past 42 years of research activity in Texas.

The examination of past events and past documents can be a vital part of understanding the future. As the Texas Music Educators Association celebrates its centennial (1920-2020), it may benefit us to examine the growth of TMEA research activities during that time. The College Division of TMEA was formed in 1952, the last division to appear (following Band, Orchestra, Choir, Elementary). Examination of available early TMEA conference programs demonstrated that research was not mentioned specifically during College Divisions' first decade. Instead, the focus was on presentations about "Articulation of Junior and Senior College Music Curricula" and "Recruiting Music Teachers for Texas Schools" (1957 TMEA Convention-Clinic Program).

I was not successful in finding exactly when in the convention programs mention of "research" began to appear. That will be an area ripe for future research. By 1978, however, research and the publication of research had become of importance because 1978 is the date of the first appearance of the *Texas Music Education Research (TMER)*. Full-text *TMER* studies are available at tmea.org beginning with 1978. In that period, an examination of conference programs in 1978 and the first papers published in *TMER* revealed that TMEA conference research presentations were eligible for consideration (or perhaps automatically included) in the *TMER*. See "A Content Analysis of *Texas Music Education Research* (1978-2018)" by Rebecca Tast for more details on the *TMER*.

Leadership & Milestones

I begin this investigation by providing background about the TMEA College Division and the growth of research by listing college leadership, research poster session events, as well as *Texas Music Education Research* (TMER) publication events. *TMER,* first published in 1978, consisted of research papers presented during the TMEA conferences. It was initially published in hard copy and consisted of compilations of typed hard copies of any papers presented. Thus originally, those in charge of the publication were listed as "compilers," and only later as "editors." The publication appeared as typeset beginning with the 1989 issue (tmea.org).

The College Division, formed in 1952 (TMEA conference program 2020), required that a College Division Chair be elected every two years. The College Division Chair was responsible for

representing the College Division's interests on the TMEA Executive Board and spearheading the College Division conference sessions. Thus the research poster session and *TMER* oversight became one of his/her duties. Apparently, at some point, a research chair was elected and took over oversight of the *TMER*. The research chair and those who helped compile each *TMER* were, with a few exceptions, listed in each year of the *TMER*, as appears in Table 1.

Table 1

TMEA College Division Leadership, TMER Compiler/Editors & Related Milestone Events

Date	TMEA College Division Chairs	*TMER* Compiled or Edited	Milestones
1978	James Kincaid	Richard Bentley	1978-1st *TMER*
1979	Richard Bentley	Sam Miller	
1980-1982	Sam Miller	Manny Brand & Sam Miller	1981-1st poster session
1983-1984	Wesley Coffman	Sam Miller, Manny Brand & Will May	
1985-1987	Hunter March	Sam Miller, Manny Brand & Will May	
1988	Margaret Hudnall	Sam Miller & Bob Duke	1988 - 1st female chair
1989	Will May	Bob Duke	1989 - *TMER* first typeset
1990-1991	Peggy Bennett	Tom Tunks	
1992	Darhyl Ramsey	Richard Fiese, Bob Duke & Tom Tunks	
1993	Darhyl Ramsey	Richard Fiese & Bob Duke	
1994-1996	Richard Fiese/ Bob Henry	*TMER* leadership not listed	
1997	Robert Henry	Bob Duke & Jacqueline Henninger	1997 - 1st person of color & 1st female *TMER* leader
1998-1999	Ken Raessler	*TMER l*eadership not listed	
2000	Janice Killian	Bob Duke Research Chair; Charlotte Mizener, Editor	2000 - 1st editor (not compiler)
2001-2014	Georgia Green / Brian Miller / Sheri Neill / Caia McCullar/ Richard Fiese/ Keith Dye	Bob Duke, Research Chair; Mary Ellen Cavitt, Editor	2013 - posters first grouped by topics
2015-2020	Si Millican / Vicki Baker Paul Sikes	Amy Simmons, Research Chair Sarah Allen, Editor	1981-2015 - full papers required 2016 abstract only required if submitting for *TMER* publication 2016 *TMER* indexed in EBSCO 2016 Posters placed in hallways

We owe a debt to the vision and leadership of those who have continued to emphasize research within TMEA. A few details may illustrate the work involved, decisions needed, and changes that occurred. Full papers were required at the poster sessions from the beginning, although acceptance was based on peer-reviewed abstracts. For example, in a personal letter notifying me on the acceptance of my peer-reviewed research poster for TMEA 1988, the following instructions appeared: Note that I received this letter via US mail.

> Each presenter should plan to bring five copies of his or her completed paper. 100 copies of a brief abstract (that includes the author's name and address), and a 30" X 40" poster that presents pertinent information concerning the research design and results.
> Signed: Robert Duke, Chair, TMEA Research Committee
> Dated: December 9, 1987

By 1996, the following was added to the research poster instructions:

> If you would like your paper to be considered for inclusion in the publication, you should *bring with you to the convention* a copy of your report on a 3.5" floppy disk.
> Signed: Robert Duke, Chair, TMEA Research Committee
> Dated: December 12, 1996

By 2013, instructions had been updated, but full papers were still required. Note I received the following notification by email. Instructions at the bottom of the letter involving posters lead to the conclusion that by 2013, we were transitioning to large printed slides.

> In order to participate in the poster session, you must send me by e-mail prior to the convention date an electronic copy of your full, completed report. You should indicate in your e-mail whether you would like your paper to be considered for inclusion in *Texas Music Education Research Online*. In addition, each presenter should bring all of the following to the convention: (1) 2 printed copies of the complete report, (2) 75 copies of a brief abstract (that includes the author's name and e-mail address), and (3) a poster that presents pertinent information concerning the research design and results. Each presenter will have a space that measures 45 X 45 inches. You may assemble multiple documents in a clear and attractive arrangement or you may use a software application like Adobe Illustrator or PowerPoint to create a single poster of larger dimensions that can be printed on an oversize printer (such printers are available at most Kinko's and other copy centers).
> Signed: Amy Simmons,
> Dated: December 11, 2012

A more recent acceptance email from Amy Simmons (December 14, 2015) indicated that beginning in TMEA 2016 *TMER* would be indexed and fully searchable through EBSCO, paper copies of the complete paper would no longer be required, and poster abstracts would be made available as an appendix in *TMER*.

Method

This current historical examination is limited to the growth of research as evidenced by manuscripts published in *TMER* 1978-2018 and manuscripts presented as TMEA research

posters 1981- 2020. For the purposes of this paper, I compiled a database of all research posters listed in TMEA conference programs 1981-2020 and included all TMER papers published 1978-1918 (the most recent date for which TMEA papers are available). Available listings included paper titles, author(s) names, author(s) affiliations and year presented. The compilation resulted in 1393 individual papers presented by 488 different researchers.

Thus the purpose of this study was to compile all available information and sort the resulting spreadsheet to allow examination of changes over time in size of research poster sessions with speculation about why changes occurred, productivity of individual authors, productivity of individual universities, and characteristics of presenters including Texas vs. national vs. international presenters. Further analysis involved a study of the research titles themselves, including the age and characteristics of study participants/respondents, a variety of topics studied, and possible changes in research methodologies employed with an eye to possible changes across decades. This study is limited exclusively to an examination of the titles of studies as listed, so conclusions are drawn based solely on the title of individual papers rather than a careful reading of the actual abstract or paper.

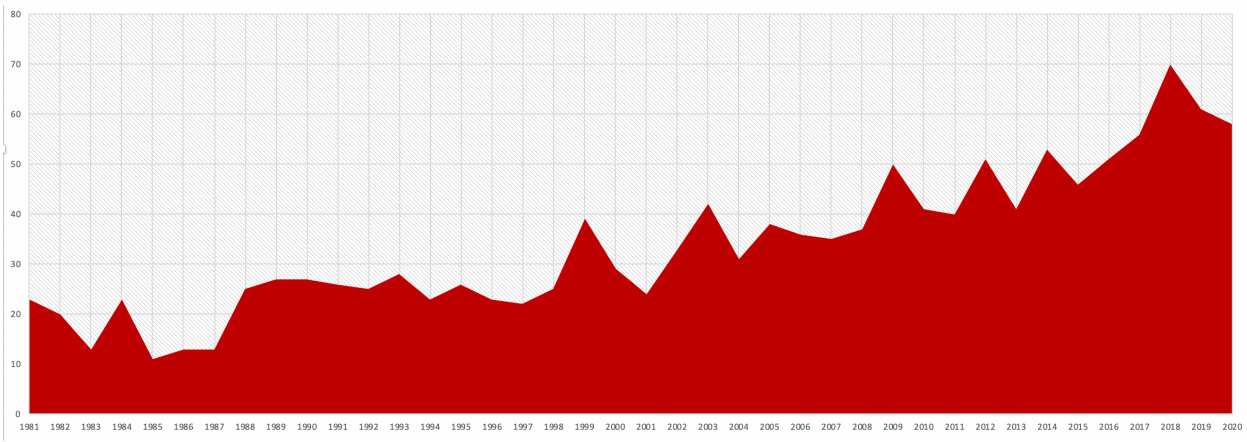
Growth of Research Poster Sessions

Figure 1 allows examination of the changes in the numbers of research posters presented each year, 1981-2020. Research poster sessions generally increased in size over time, ranging from 11 posters in 1985 to 70 posters in 2018. On a personal note, I first came to Texas as a doctoral student in 1977, and I have a distinct memory of bringing a poster to TMEA in 1979 or 1980 where there were perhaps 6 posters laid flat on a table in a tiny room. However, I can find no one else who can confirm that memory (noting that some of the researchers involved are no longer with us) or knows the decisions that led to posters instead of paper presentations. My own CV revealed that the National Association for Music Therapy (now American Music Therapy Association) and Music Educators National Conference-MENC (now National Association for Music Education-NAfME) had instituted research poster sessions by 1979 and 1980 respectively.

So music organizations were using research poster sessions during this time period. Specifically, in Texas, conference programs show that TMEA research poster sessions had begun by 1981. Thus the majority of this paper will be limited to research presented and/or published between 1981 and 2020. Figure 1 allows graphic comparison of changes in the number of research posters 1981-2020.

Figure 1

Number of TMEA Research Posters, 1981-2020



One might question what events affected the changes in numbers. Examination of national music education research situations during peak TMEA poster numbers may help explain the changes in numbers of posters. After the 2008 MENC (now NAfME) conference in Milwaukee, membership was informed that there would no longer be biennial conferences, long a staple for music researchers. Note the spike in research posters at TMEA 2009. These spikes continued, perhaps reflecting the expectation of biennial research conferences (2012, 2014, 2018). NAfME will return to the biennial conference, including both researchers and practitioners in November 2020. The anticipation of participation in the national conference might explain the slight dip in TMEA poster numbers for 2020. Further examination of the effect of national events on Texas research is certainly warranted.

Researcher Productivity

The database allowed me to examine the names of individual authors and the number of times they presented at the TMEA research poster session, as displayed in Table 2. As appropriate, I collapsed any name changes into a single researcher based on my personal knowledge of the individuals; errors are possible. There were 488 researchers (including both sole and collaborative authorships) presenting between 1981 and 2020. Of those, 43.4% (212) presented a single time, 33.7% (111) presented twice, and 28.3% (138) presented 3-9 times. Overall, 94.5% (461) presented fewer than 10 times. The remaining 5.5% (27 researchers) presented more than 10 times, with one researcher, Bob Duke, presenting a remarkable 69 times.

Sole and co-authorship is a factor that perhaps implies purposeful mentoring. The majority of poster presentations (369 or 75.6%) listed co-authors. Based on my knowledge of many of the researchers, co-authors appeared to be colleagues, graduate students, or graduate students who became colleagues. The three most productive researchers (See Table 2) frequently included co-authors: Duke = 84.9% co-authored (58 of 69), Killian = 60.4% co-authored (29 of 46), Jellison = 80.5% co-authored (33 of 41). All three mentioned in private conversations that their co-authorship was designed to mentor doctoral students. See Table 2.

Table 2

Frequency of TMEA Research Poster Presentations by Individual Researchers

Poster Presentation Frequency 1981-2020	**Researcher Names / = ties**
69	Robert Duke
46	Janice Killian
41	Judith Jellison
33	Amy Simmons
29	Diane Persellin
28	Debbie Rohwer
26	Eugenia Costa-Giomi
21	Vicki Baker

19 Carla Cash / Charlotte Mizener / Don Taylor
18 Jacqueline Henninger
17 John Flohr / Rosemary Watkins
16 Don Hodges
15 Michele Henry
14 Sarah Allen / Kris Chesky
13 Lisa Maynard / John Wayman
12 Dennis Siebenaler / Catherine Tu
11 Elaine Colprit / Virginia Davis / Marilyn Kostka / Laurie Scott
10 Mary Ellen Cavitt

Note: Includes all with 10 or more studies 1981-2020

Professional Affiliations

For tabulations of professional affiliations, I took into account the affiliations of both first authors and co-authors. For example, I counted the same poster twice if it had two authors. The majority of authors (1215 or 80.9%) listed Texas affiliations. Out-of-state affiliations were listed by 279 (18.6%) and international affiliations were listed by 7 (00.5%) for a total of 1501 authors. Other potentially informative divisions of these affiliation data included Community Colleges = 12, Commercial Businesses = 2, and Pre-College (K-12) affiliations = 128. Table 3 lists Texas affiliations. Table 4 lists out-of-state affiliations.

Table 3

Numbers of TMEA Research Posters Affiliated with Texas Institutions of Higher Education

Name of School	1st Author Affiliation	Co-Author Affiliation	Total # Studies
UT-Austin	269	15	284
Texas Tech University	134	14	148
Univ. of North Texas (135) + North Texas State (6)	141	6	147
Baylor University	74	1	75
Texas Woman's University	68	6	74
UT-San Antonio	57	5	62
Southern Methodist University	32	17	49
Texas State U (27) + Southwest Texas State (3)	30	4	34
Trinity University	31	2	33
University of Houston	31	1	32
UT-Arlington	28	2	30
UT-Rio Grande Valley (10)+UT-Pan American (18)	28		28
Texas Christian University	19	1	20

Lamar University	14	14
Texas A&M Kingsville (13) + Texas A&I U (1)	14	14
UT-Permian Basin	11	11
Stephen F Austin State University	8	8

Note: Includes all with 8 or more studies 1981- 2020

Texas Higher Education Affiliations

Researchers affiliated with 48 Texas higher education institutions produced 1114 studies that resulted in research posters between 1981-2020. The number of studies per school ranged from 1 to 284. Table 2 lists the 17 institutions producing 8 or more studies and producing 95.8% (1063) of the 1114 studies. Remaining 31 institutions produced 1-4 studies (51 studies or 4.6%).

Out-of-State Affiliations

Thirty-seven states (excluding Texas) were represented, including 104 different out-of-state universities. Table 4 allows examination of the names of out-of-state universities which were represented 4 -23 times One could conclude that, although TMEA is by definition a state of Texas conference, the fact that 75% of the US states are represented argues that TMEA has become a national conference, at least as far as research is concerned.

Table 4

Frequency of Out-of-State Universities Presenting Research Posters 4 or More Times at TMEA 1981-2020.

Name of School	1st Author Affiliation	Co-Author Affiliation	Total # Studies
Florida State, FL	21	2	23
Bowling Green State, OH	14	2	16
University of Utah, UT	8	2	10
University of Memphis, TN	7	1	8
Arizona State University, AZ	6	1	7
Louisiana State University, LA	7		7
University of the Pacific, CA	6	1	7
Michigan State University, MI	3	3	6
Ohio State University, OH	6		6
University of Central Arkansas, AR	6		6
University of Oklahoma, OK	4	1	5
Cal State U-Fullerton, CA	4		4
Eastman School of Music, NY	4		4
Georgia Southwestern State, GA	4		4
Iowa State University, IO	4		4
University of Missouri, MO	1	3	4

University of New Orleans, LA	4		4
University of South Carolina, SC	2	2	4
Weber State College, UT	4		4

One might argue that researchers from states contiguous to Texas predominate because of geography. An examination of Table 5 reveals that this assumption is not the case with Florida, Ohio, and California ranked highest based on the frequency of presentations. Table 5 ranks states by numbers of posters presented (5-1142). Not listed are 14 additional states that accumulated 1-4 presentations.

Table 5

Frequency of Poster Presentations by State

State	Number of Presentations
Texas	1142
Florida	34
Ohio	29
California	16
Louisiana	16
Utah	15
Oklahoma	14
Arkansas	12
New York	12
Tennessee	12
Arizona	11
Georgia	10
Missouri	9
Illinois	7
Alabama	6
Indiana	6
Michigan	6
Pennsylvania	6
Virginia	6
Kansas	5
North Carolina	5
South Carolina	5
Wisconsin	5

Another possible explanation for the participation of out-of-state universities is the idea that several Texas universities prepare PhD students to become researchers and teachers of future music educators. Those former PhD students, who accept university positions across the nation, may tend to return to TMEA. One could question, however, why these students return to a state conference rather than focusing on national conferences plus their own state conference. These results speak to the eminence of TMEA as a national research conference and to the eminence of Texas universities which prepare PhD students to enter university teaching. Future research might benefit from tracing the careers of graduates from the three or four Texas universities most frequently preparing PhD music education students (see Table 3) to determine the growing diasporas of graduates from Texas universities.

International Affiliations

The number of authors listing international affiliations (7) included China, Brazil, Uganda, Thailand, Japan, and the UK. International students who recorded only their US university affiliation were not counted as international. Thus, actual international presence at TMEA research may be larger than shown here.

Authors with K-12 Affiliations

It would seem informative to examine non-university authors and their research. Several studies (128) were authored or co-authored by researchers listing a K-12 affiliation. I would contend that these K-12 teachers may have access to asking the right questions about what research can best be applied in the classroom; thus, their presence is extremely important. Of those 128, 40 co-authored with someone with a university affiliation. However, 88 of these K-12 people had no co-author. Some affiliations may be skewed because of incomplete reporting, i.e., a university was involved, but was not listed. But based on these data, these 88 were researchers on their own, lending credence to the idea that a university affiliation is not required for research productivity. Of the 128, four listed music therapy affiliations and two listed studio or private lesson affiliations. The remaining 122 listed K-12 affiliations (119 in Texas and 18 out-of-state). Numbers included the fact that co-authored studies are counted more than once (one count for each co-author).

Of particular interest is the number of non-university-affiliated researchers who presented more than once. Eleven individuals presented more than once with frequency ranging from 2-7. Of those 11 individuals, several have gone on to take higher education positions. These known to me include Richard Holsomback (Northwestern State Louisiana & elsewhere), Janice Killian (Texas Woman's, Texas Tech), Marilyn Kostka (Northern Arizona), Dennis Siebenaler (California State-Fullerton), Mark Turner (Stephen F. Austin University), Dwayne Wasson (Kent State University) and Richard Watkins (Austin Community College).

Several have gone on to publish their research in *TMER*. It is not known whether these eleven continued to do research because of the love of the activity, or because of future goals toward careers in higher education, or for some other unexplored reason. Their career paths certainly exemplify the idea that one should act like the position one desires. Future research might benefit from interviewing these public school researchers to identify what kept them involved in research when their peers were not.

Participants/Subjects Studied

An examination of the participants studied revealed 669 titles that mentioned who was researched, allowing consideration of the participants/subjects themselves. After careful review of the titles, I collapsed titles into categories comprised of K-12 students (296 studies): adults (180), college students (155), and undeterminable (38). Table 6 allows the examination of types of participants using these categories.

Table 6

Categories of Participants Mentioned in Titles of 669 Studies

K-12 Students 296	Adults 180	College Students 155	Indeterminable 38
High school students = 59	Conductors = 33	Education majors = 41	Musicians = 19
Children= 51	Music teachers = 30	Music ed majors = 37	Students= 17
Middle/Jr High students= 45	Adults = 29	College students = 26	Music schools =1
Elementary students = 39	Teachers = 24	Vocal ed majors = 18	Jail inmates = 1
Preschool students = 28	Choral directors = 12	Non-music majors = 15	
Infants = 24	Band directors = 11	Student teachers = 12	
Beginning students = 16	Judges = 7	Music ed Grad students= 6	
Adolescents = 14	Administrators = 5		
Secondary students = 7	Cooperating teachers = 3		
Music students = 5	Faculty = 2		
Vocal students = 4	Music therapists = 2		
K-12 students = 3	Researchers = 2		
Students with disabilities = 1	Senior citizens = 2		
	Parents = 1		
	Secondary teachers = 1		
	Veterans = 1		

Methodologies Used

Titles were perused carefully for the apparent method (based only on the title). The resulting methodologies were collapsed into the following categories: Descriptive, Historical, Quantitative, Qualitative, Literature Review, Music Theory Analysis, and Philosophical. Across the decades, Descriptive appeared in more than two-thirds (68.5%) of the titles, and Quantitative appeared in a quarter of the titles (25.3%). No other methodology appeared in more than 2.5% of the titles. Table 7 allows examination of changes in the relative frequencies of these identified methodologies over the four decades under discussion, recognizing that there are no doubt multiple ways to divide the methodologies.

The first decade (1981-1990) was characterized by emphasis on Quantitative rather than Descriptive. The following three decades reversed this trend with a notable increase in Descriptive methodologies, a circumstance undoubtedly worthy of future examination. Qualitative methodology first appeared in a study in 1991 by Richard Fiese, "An Examination of

Public Secondary School Band Directors' Qualitative Judgements of Wind Band Scores." It wasn't until the most recent decade that qualitative studies were mentioned more frequently. But even in the last decade (2011-2020), qualitative studies appeared only 4.6% of the time (25 out of 527 studies during that period. Reviews of related literature rarely occurred during the first three decades (see Table 7) but increased during 2011-2020, with 26 of 527 studies (4.9%).

Table 7

Frequency of Methodologies Used Across Four Decades of Papers Accepted for the TMEA Research Poster Sessions

	1981	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	
Descriptive	6	9	3	7	10	0	5	8	14	10	
Historical	4	1	2	4	0	0	0	0	0	0	
Quantitative	10	10	8	10	1	13	8	17	15	16	**Mean #**
Qualitative	0	0	0	0	0	0	0	0	0	0	**Posters**
Lit Review	1	0	0	1	0	0	0	0	0	0	**per**
Theory Analysis	1	0	0	1	0	0	0	0	0	0	**Decade**
Philosophy	0	0	0	0	0	0	0	0	0	0	**19.5**
	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	
Descriptive	20	18	22	24	15	17	14	18	33	29	
Historical	0	0	0	0	0	0	0	0	0	0	
Quantitative	5	7	5	1	11	6	8	8	6	4	**Mean #**
Qualitative	1	0	0	0	0	0	0	0	1	0	**Posters**
Lit Review	0	0	0	0	0	0	0	0	0	0	**per**
Theory Analysis	0	0	0	0	0	0	0	0	0	1	**Decade**
Philosophy	0	0	0	0	0	0	0	0	0	0	**27.4**
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	
Descriptive	18	25	33	22	27	30	24	27	37	30	
Historical	0	0	0	0	0	0	0	0	2	1	
Quantitative	4	6	9	7	11	6	10	11	8	8	**Mean #**
Qualitative	0	0	0	0	0	0	0	1	3	1	**Posters**
Lit Review	2	1	0	2	0	0	0	0	0	0	**per**
Theory Analysis	0	0	0	0	0	0	0	0	0	0	**Decade**
Philosophy	0	0	0	0	0	0	0	1	0	0	**36.7**
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	
Descriptive	27	32	29	31	33	43	44	46	37	43	
Historical	2	1	0	2	1	0	2	2	0	2	
Quantitative	8	11	10	13	9	4	6	14	17	5	**Mean #**
Qualitative	2	2	1	5	3	2	1	2	4	3	**Posters**
Lit Review	1	5	1	1	0	3	3	6	3	3	**per**
Theory Analysis	0	0	0	0	0	0	0	0	0	0	**Decade**
Philosophy	0	0	0	0	0	0	0	0	0	2	**52.7**

Such increases in a variety of methodologies may indicate a tendency toward those specific methods, or perhaps may indicate a greater awareness of the diversity of methodological options currently available to researchers. Increases in reviews of related literature may also suggest that music education research itself has reached an age in which there are bodies of existing research that can be summarized. Perhaps we have reached a critical mass of related studies, making reviews of literature common and valuable. Glances at the content of recent issues of *Update: Applications of Research in Music Education* would echo a prevalence of publishing reviews of literature. The discerning reader may also notice other trends and changes in methodologies used over the past four decades. Research is indeed, a changing process.

Why descriptive rather than quantitative? Are these categories accurate? Do papers prepared as abstracts for poster sessions differ in some way from those that are submitted for publication in research journals? Was there a difference in content or focus when abstracts rather than complete papers were no longer required? Researchers interested in content analyses of various journals such as those completed by Lane (2011), Millican (2017), and Diaz and Silveira (2014) might consider comparisons of the broad categories of quantitative and descriptive research over time.

Topics Presented Based on Research Titles at TMEA Poster Sessions

Categorization and analysis of the issues presented at the TMEA Research Poster sessions are perhaps the most subjective of all the analyses in this paper. As such, the results are the most open to alternative interpretations. Using the standard qualitative processes (Merriam & Tisdell, 2015; Saldana, 2015) of assigning a topic category (or sometimes multiple categories) to a specific research title, then collapsing those initial topics into larger categories, I developed six overarching themes: Pedagogy, Psychology, Legislation, Technology, Philosophy and History. Starting in 2013, posters were placed into categories by the Research Chair to make it easier for attendees to find specific topics and to encourage conversation among like-minded researchers. These categories were published in the TMEA Convention Programs, allowing me to use those categories as my initial starting point. See Table 8.

Table 8

Frequency of Themes, Categories, and Topics of Research in TMEA Research Poster Sessions

Overarching Themes		Categories: Ensemble/ Instrument/Class		Topic	
Pedagogy	387	Choral/Vocal	191	Inclusion/Music Therapy	69
Psychology	349	Elementary	133	Multicultural/Race	52
History	56	Instrumental	73	Gender/Identity	22
Legislation	41	Strings	71	Improvisation	21
Technology	36	Band	57	Composition	18
Philosophy	4	Piano	12	Health	18
		Jazz	11	Music theory	12

Although it is beyond the scope of this single paper to examine the topics in great detail (certainly an interesting area for future research), please allow me a few observations. The division between Pedagogy and Psychology stayed relatively consistent across time, as did focus on Inclusion. Technology remained relatively stable, but the topics involving Technology changed notably. Early studies focused on computer-aided instruction (CAI) and video. For example, Antoinette Corbet (1981) "Criteria for the Development of Music CAI for the Community Choir" and Diane Persellin (1987) "Bridging the Gap between the College Music Methods Course and Student Teaching: Video-Technology as a Valid Instructional Tool." Later studies evaluated the effects of technology, e.g., Cynthia Benson (2001) "The Effects of Technology in Music: A Review" or Colleen Petty and Michele Henry (2014) "The Effects of Technology on the Sight-Reading Achievement of Beginning Choir Students."

Examination of titles and topics allowed some interesting historical conclusions. For example, Improvisation appeared throughout the decades, but notably, only 3 of the 21 studies involved any population except children, and those three did not appear until after 2004. Gender appeared as a topic in early years, Linda Hartley (1995) "A Preliminary Study of Gender Among College Band Directors." But the first mention of LGBTQ and gender identity was much later: Don Taylor (2016) "Mentorship Between LGBTQ Student Teachers and Successful LGBTQ Educators: An Examination of Informal Learning." The relationship between topic and time would be a worthy area of further extensive research.

Future Research and Concluding Thoughts

Additional research possibilities are extensive within a dataset like this one; chief among them is the question of changes in research topics and methodologies over time. Early topics specifically involved music theory and studio teaching in the early poster years. Several references to multicultural topics appeared in the 1980s; perhaps today's tendency toward the examination of diversity is similar to what researchers in the 1980s called multicultural. Vocabulary and the change in definition over time is an interesting area that begs exploration. Several other additional possibilities occur. Why the apparent growth in research apparent in these forty years? It is possible that research as a way of knowing is increasing in importance, and the growth of the TMEA research poster session reflects that increase in importance. A closer examination of the role of research in early College Division conferences (1952) leading to the establishment of a research poster session (1981) should be conducted since I was unable to gain access to that information. A careful examination of how research findings as presented at research poster sessions are disseminated to K-12 practitioners and how those careful research findings can inform practitioners is an ongoing area of importance.

I hope this paper is an example of how existing documentation of events can be developed into a sortable data set that allows deeper consideration of why researchers were inspired to participate in a poster session. For example, we have not touched on the effect of tenure and promotion might have on research topics selected. The data are waiting to be explored.

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Keywords: Research poster sessions, *Texas Music Education Research,* scholarly productivity, affiliated institutions productivity

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