

IJRCS

International Journal of Research in Choral Singing

The Scientific Research Journal of the American Choral Directors Association

International Journal of Research in Choral Singing
(2024) Vol. 12 88-110

Validating and Piloting a Choral Educator Questionnaire: The Use of Culture Bearers and Pedagogical Implications of Singing in Multiple Timbres

Andrew P. Schmidt¹

Abstract

Many educators strive to enact culturally relevant practices by introducing repertoire of various cultures and genres. One major barrier to this implementation includes the variety of vocal sounds inherent in traditions outside those generally presented in choral environments within the United States of America. In this study, I validated and piloted a choral educator questionnaire. I designed the survey to solicit information about the use of vocal pedagogy in the ensemble classroom. In the survey, I also asked about educators' use of vocal pedagogy as related to issues of vocal health and teaching non-Classical repertoire. After reviewing methodologies used in prior choral education survey studies, I chose to validate the questionnaire through a cognitive interview process. This process yielded a revised questionnaire that a small sample of choral educators piloted. Results of these two phases culminated in a final questionnaire for use with a larger sample.

Keywords: choral pedagogy, vocal pedagogy, culture bearer, vocal health, validity, pilot

¹ Georgia State University School of Music, Georgia State University, Atlanta, GA., USA

Corresponding author: Andrew P. Schmidt, Georgia State University, P. O. Box 3965, Atlanta, GA 30302, USA.
Email: aschmidt16@gsu.edu

Validating and Piloting a Choral Educator Questionnaire: The Use of Culture Bearers and Pedagogical Implications of Singing in Multiple Timbres

Issues of cultural relevance between the type of music taught and the type of students singing it permeate choral classrooms in the United States of America (Jenkins, 2022; Kratus, 2007; Williams, 2011). While many educators strive to enact culturally relevant practices by introducing repertoire of various cultures and genres, major barriers to their implementation include the variety of vocal sounds inherent in traditions outside those generally presented in choral environments within the United States of America (Bennett, 2021). Categorical thinking, in this case between vocal timbres generally inside or outside choral classrooms, may deleteriously invite essentialism, erect false borders, or reinforce misleading narratives (Rodríguez, 2022). I decided, however, that an investigation of how choral educators handled sounds of various repertoire required some characterizations. In this study, I used the phrase Western Classical as common parlance to indicate the diaspora of art music conventionally thought of as originating in ancient Greece and evolving throughout Western Europe (Kajikawa, 2019). As the sounds of this music characterize the standard timbres in choral classrooms, for the purposes of this study I characterized other timbres as non-Classical. Additionally, the U.S.A. contains musical idioms like pop, Broadway, Jazz, spirituals, gospel, etc. I characterized these as familiar, non-Classical timbres as the intended participants would likely possess some familiarity with these timbres. For example, a pop song by a contemporary artist uses different vocal timbres than a work by Mozart or Beethoven. Finally, I used the term unfamiliar, non-Classical to characterize timbres found in music not encapsulated by the other two classifications. Art music sounds and practices akin to Western Classical ones exist globally (Inoue, 2018). Unfamiliar, non-Classical sounds, in this paper, refer to music included in choral classrooms under the umbrella of “multiculturalism” (Campbell, 2021). According to Campbell, multiculturalism in the classroom includes efforts to explore vernacular musical traditions outside of the typically Eurocentric ones considered “school music.” For example, traditional Bulgarian singing uses different vocal timbres than those generally taught in choral classrooms (Stefanova & Speed, 2023).

To make culturally relevant sounds, the singer needs to know how to make stylistically appropriate vocal choices (Goetze, 2017). According to Goetze, teaching others to sing in multiple styles poses vocal health and vocal pedagogy challenges for the choral educator. Recent scholarship encourages partnerships with “culture bearers,” members of specific musical traditions, when teaching non-Classical music (Bennett, 2021; Norwood et al., 2018). Culture bearers help select and authentically teach varied sounds and stories. Little evidence exists, however, of the widespread adoption of this practice. Choir teachers, due to the nature of their discipline, serve as *de facto* vocal instructors (Wolverton, 1989). As most choral students do not study voice individually with a vocal instructor, they acquire the majority, if not all their singing technique in choir. A 2017 survey of universities in the

U.S.A. revealed, however, that out of 61 institutions offering music education coursework, only 39.5% required a single course in vocal pedagogy (Hansen, 2017).

For many students, their choir director(s) will be the only vocal instructor(s) they encounter (Wolverton, 1989). In what ways (if any) do choral teachers address issues of varying vocal timbres? How do they feel about their ability to address timbral issues through vocal-pedagogical means? What impacts on student vocal health do they feel their pedagogical choices make? Do they recruit the aid of culture bearers, and what vocal pedagogy choices happen when this occurs? I decided to pose these questions, and others, to choral educators through an online questionnaire. As part of the research process, I chose to validate and pilot the questionnaire. Detailing this activity encompasses the remainder of the current study. Survey validation increases construct validity, reliability, consistency, comparability of teacher experiences, and overall future results (Porter et al., 2010; Darling-Aduana, 2021). To begin, I reviewed the methodologies of previous choral music education surveys. This review guided my selection of validation methods prior to piloting the questionnaire.

Literature Review

Validation Methods in Choral Music Education Surveys

While all research methods include strengths and weaknesses, in education, self-report surveys have been effectively implemented to assess teachers' pedagogical strategies, as well as the type and quality of their professional development (Desimone & Le Floch, 2004). In choral music education, recent surveys assessed teacher preparation to work with diverse learners and social emotional needs (Culp & Salvador, 2021; Culp et al., 2023), choral conducting behaviors and pedagogies (Regier et al., 2022), interest in teaching choir after taking methods courses (Kim, 2022), beliefs and behaviors related to rehearsal approaches (Ganschow, 2014), vocal health at an All-State choral event (Daugherty et al., 2011), choral directors' multicultural teaching practices and attitudes (Bennett Walling, 2016), and the prevalence of vocal health and anatomy and physiology education among choral educators (Grady & Brunken, 2022).

Researchers from these studies employed three reoccurring strategies to increase survey validity: basing survey construction upon previous surveys and related literature (Culp & Salvador, 2017; Culp et al., 2023; Daugherty et al., 2011; Grady & Brunken, 2022) procuring content feedback (Culp & Salvador, 2021; Regier et al., 2022), and pilot testing (Bennett Walling, 2016; Culp et al., 2023; Ganschow, 2014; Grady & Brunken, 2022; Regier et al., 2022). In the case of Culp & Salvador's 2021 study, the researchers adapted a previously used survey (Salvador & Kelly-McHale, 2017) which underwent a piloting phase as well. The 2023 study by Culp et al. further adapted these previously used surveys. Piloting phases generally utilized between five and ten testers. When researchers procured content feedback, two (Regier et al., 2022) and five (Culp & Salvador, 2021) individuals participated.

According to Messick, author of *Educational Measurement* (1989), construct validity relies upon either and sometimes both content and criterion. Content should represent

the domain it covers with high relevance, and criterion should specifically measure the relationship between an applied purpose and applied setting. For example, measuring the inclusion and exclusion criterion for study participation should factor in the relationship between the purpose and setting of the study. The reviewed surveys, as well as this one, focused on either content validity via construction, feedback, and piloting, or criterion validity via piloting. Sometimes both foci occurred. In all cases, researchers employed what Lissitz and Samuelson called test definition and development as a first step in establishing content validity (2007). This “first...and the most basic step” (p. 446) occurs through relating test content to the subject domain. Only one set of researchers (Daugherty et al. 2011) ceased their validation process at this step, creating their survey tool as an adaptation of previous investigations. All other studies involved a pilot phase. Piloting phases foremost check for feasibility, or whether respondents will complete the survey (Porter et al., 2010). Beyond this, pilot testing enhances content validity by checking item intelligibility, unambiguity, bias, and competency—or its ability to handle many possible response types (Stone, 1993). For instance, a participant might desire the missing option “none of the above” as a response to a multiple choice, opinion question. Two studies (Culp & Salvador, 2021; Regier et al., 2022) procured content feedback. This step reinforces the iterative process of increasing content validity by soliciting recommendations from experts or representatives of the selected population (Darling-Aduana, 2021; Porter et al., 2010). Culp & Salvador asked members of the targeted population for feedback (2017), while Regier et al., consulted with domain experts (2022).

For this study’s questionnaire, I employed all three strategies to increase overall validity, consistency, comparability of teacher experiences, and future results (Porter et al., 2010; Darling-Aduana, 2021). First, I developed the survey considering the subject domain and previous investigations by Bennett Walling (2016), Daugherty et al. (2011), and Grady & Brunken (2022). Second, I procured feedback from both experts and participant representatives through a cognitive interview process (Desimone & Le Floch, 2004; Porter et al., 2010). Finally, I piloted the questionnaire with a small sample of choral educators. To guide the validation process, I asked the following research questions. (1) What items should be included that investigate choral teachers’ vocal pedagogy attitudes and timbrel choices, pedagogical impacts on vocal health, and their use (if any) of culture bearers? (2) To what extent is the developed questionnaire valid, reliable, consistently comparable, and well-constructed?

Methodology

Program Description

The study followed an exploratory sequential design (Tashakkori et al., 2021) where the qualitative phase begins the study, followed by a quantitative phase. Researchers traditionally use this design in the development of new surveys so that results from quantitative data confirms the initial qualitative exploration (Munce et al., 2021). Combined and trans-

formed results informed the final edits of the validated and piloted questionnaire. A cognitive interview process (Desimone & Le Floch, 2004; Porter et al., 2010) constituted the first phase. I collaborated with highly trained individuals to engage with and examine the drafted questionnaire for content and construction. I submitted the drafted questionnaire to five individuals from either choral education or survey design backgrounds. Participant responses provided editorial feedback on the quality of the drafted questionnaire. I analyzed interview responses through a two-tiered coding protocol (Saldaña, 2021) in NVivo 14. I began with a *priori* codes, found in Table 1, derived from my proposed research questions.

In phase two, nine choral educators piloted the revised questionnaire. This iteration included an additional question that solicited general feedback on the quality and content of the questionnaire. I analyzed responses for comparison between first phase and second phase participant groups. I utilized results in the completion of a final drafted questionnaire. Google Forms, which hosted the pilot questionnaire, collected data for the initial analysis. By completing these two phases, the resulting survey better (a) applies to a variety of settings, (b) possess construct validity (c) provides reliability of results, (d) eschews bias, (e) predicts outcomes, and (f) yields pedagogical profiles (Porter et al, 2010).

Table 1.

Analysis Codes

First-tier/Parent codes	Second tier/Child codes
Construction	Response Style Question Order Missing or Added Information Clarification
Vocal Pedagogy	Vocal Health Teacher Choices Teacher Attitudes
Validity	Unfair Leading Biased
Culture Bearer	Often cross-coded with Construction and Validity
Demographics	Often cross-coded with Construction and Validity

Positionality Statement

As a co-participant in the semi-structured interviews, the disclosure of my positionality provided both transparency and limitations to the study. My educational and professional background consists of 15+ years of work as a choral educator, vocal instructor, and student of voice science. My academic leanings prioritize pragmatic and empirical findings that may deprioritize other ways of knowing (intuitive, anecdotal, affective, sympathetic). When listening to participants and analyzing data I maintained reflexivity and awareness of this positionality, an adaptation of reflexive journaling (Tashakkori et al., 2021). By adhering foremost to the above-stated research questions, I endeavored to mitigate my biases. I furthermore acknowledged that human individuals perform research, underscoring the need to maintain reflexivity.

About the Choral Educator Questionnaire

I designed the choral educator questionnaire to examine some of the gaps left unaddressed in the previous literature and to incorporate adaptations of questions used in prior investigations (Bennett Walling, 2016; Daugherty et al., 2011; Grady & Brunken, 2022). In addition to updating the prevalence of vocal pedagogy instruction among choral educators (Hansen, 2017), I asked for specific resources teachers referenced for vocal pedagogy. I surveyed domestic respondents and their use of culture bearers, which compliments the previous study of international educators (Bennett Walling 2016). I also asked respondents to consider specific teaching practices related to singing music from multiple styles and cultures. Importantly, the design of survey items elicited preferential or frequency rankings of vocal pedagogies, assessments of attitudes towards teaching a variety of vocal timbres, and the preference and frequency of implementing vocal health strategies. I designed the structure of the questions and statements to investigate the above phenomenon from multiple standpoints, thereby potentially providing multiple related data points. I used feedback from this validation and piloting phase to develop a final questionnaire.

Sample and Setting

Cognitive interviewees consisted of three choral educators and two education and social policy professors. These two professors possessed extensive research and survey development experience. I recruited the choral teachers from my professional network of education colleagues. I previously worked with one in a professional capacity that was not education related. These participants all possessed graduate level degrees; however, their awarded degrees came from different geographical regions. Their work experience included 6 years, 11 years, and over 20 years. One reported high familiarity with vocal pedagogy, one reported moderate familiarity, and one reported they felt lacking in their knowledge. The two professors came from the same university department though one sits at the beginning of their career, and one nears retirement age. One professor possessed a speech and

language background.

I recruited the nine pilot testing participants from my personal network of colleagues. I employed no exclusionary measures based upon level of experience, types of educational institution, or level of education. Of the participants ($N = 9$), 77.8% held master's level degrees, and one each held an undergraduate and doctoral degree respectively. The teachers represented all levels of choral classrooms including elementary through undergraduate levels. High school classrooms ($n = 5$) hosted the largest number of participants. The least experienced participant possessed one year of teaching experience, and the most experienced held over twenty years' experience, with the largest group ($n = 4$) holding 11-20 years of experience. Of the participants, 66.7% taught non-classical singing classes such as a musical theater course as part of their employment. All participants returned informed consent-forms that explained their involvement with the study in accordance with Georgia State University's Institutional Review Board. Results from piloting the questionnaire yielded the following additional demographics.

Choral Educator Demographics – Schooling

All respondents ($N = 9$) reported taking courses about vocal pedagogy. All but one ($n = 8$) studied diction, and less than half ($n = 4$) studied acoustics or physics of sound. Eight (88.9%) took at least one of these courses as a required part of their undergraduate degree program. Four elected to take at least one of these courses as part of their undergraduate degree program. Three were required and three elected to take these courses as part of their graduate programs. Three took these types of courses as part of a workshop or conference experience.

Choral Educator Demographics – Institutional Information

Participants taught an average program size of 88 singers, with the largest teaching 200 singers and the smallest teaching 10 singers. While 77.8% ($n = 7$) of participants reported teaching majority White/Caucasian students, 11.1% ($n = 1$) reported majority Non-White and 11.1% ($n = 1$) reported almost exclusively Non-White students. No participant reported their program as almost exclusively White/Caucasian. Eight out of nine reported the socio-economic status of their students as medium (55.6%) or low (33.3%) with only one (11.1%) reporting high socio-economic status. Two participants listed vocal pedagogy textbooks they currently use.

Qualitative Cognitive Interviews

Semi-structured, cognitive interviews occurred virtually during a mutually agreed upon meeting time between the investigator and interviewee. I audio recorded each interview. The interviewee engaged in a "think aloud interview," where respondents engaged in a running commentary as they worked through items. They remarked on the clarity and ac-

curacy of items, how items reflected their experiences, and what items might be missing. I further probed responses using selected questions from a protocol that gauged participant understanding of each item's intent (Desimone & Le Floch, 2004). I included the protocol in Appendix A.

Results from these interviews informed the initial editing of the drafted questionnaire. Threats to survey validity often occur due to the complexity of a phenomenon, respondents desiring to give socially acceptable responses, and respondents providing misleading data (Desimone & Le Floch, 2004). Cognitive interviews address these threats due to the meta-cognitive task of engaging with the survey, alongside the investigator, and detailing their experience. The investigator then modifies each item for effectiveness. I encouraged each participant to provide critical feedback freely and honestly on the construction and content of the questionnaire. Accordingly, participant responses varied, agreed, and conflicted. Each focused on differing aspects of the questionnaire depending on participant interest and expertise. The approximately five hours of interviews yielded 244 parent and child codes pertaining to the 31-question survey. The interviews yielded four frequently discussed themes: (1) clarifying language, (2) adding demographically related items, (3) mitigating survey bias in relation to issues of pedagogy and culture, and to a lesser degree, (4) considering item order, response type, and the delineation between survey sections.

Quantitative Pilot Data Collection

I used Google Forms to collect data in the form of Likert-style response questions to gauge issues of comfortability, frequency, and agreement regarding issues related to the use of vocal pedagogy for teaching various timbres. The National Association of Teachers of Singing stresses the importance of voice science as a “flag bearer” of vocal pedagogy (Edwin, 2020; McCoy, 2020), therefore I crafted response options that utilized varying degrees of voice science-related knowledge. The survey also contained ranked order questions, selected response items, demographic questions, and brief narrative prompts. All nine participants answered each question except one participant skipped item 16 which asked about mitigating issues of vocal health. They did not offer an explanation in their comments.

Analysis

I analyzed the cognitive interviews in a two-tiered coding system adapted from Saldaña's 2021 text *The Coding Manual for Qualitative Researchers*. I established the first-tier, parent codes a priori based upon my research questions: Construction, Vocal Pedagogy, Validity, Culture Bearer, and Demographics. Though demographics did not appear in my research questions, the first two sections of the survey included demographically related questions. The second coding phase examined common areas of feedback and identified their appropriate locations within the questionnaire. I often cross-coded the first-tier codes Culture Bearer and Demographics with Construction and Validity. Second-tier, child codes

emerged from participant responses. I listed these in Table 1.

I employed a third coding phase to investigate common language or suggested edits that aided in formatting the questionnaire items for initial piloting. As a result, the final questionnaire included 31 items, an increase from the initial 24. Nineteen items changed, including the seven added items, based upon participant feedback. Each interviewee offered feedback that I incorporated immediately thereafter and prior to subsequent interviews. This happened most frequently when typos, grammatical issues, verb-choice, and response-style suggestions occurred. For instance, one participant recommended that in the prioritization questions, where survey respondents could only select an option once, I use the verb “rank” rather than “rate” because “rank” more directly implied selecting an option only once. During the interview process, I added two questions after the first two interviewees remarked upon the need for demographic information about racial and socio-economic data. At this same time, I noticed that the survey lacked a question that directly asked if teachers used culture bearers. I added this question prior to the final three interviews as well. The other three participants suggested edits to those added questions. Next, I gathered descriptive statistics from the embedded features in Google Forms and compiled composite scores as well as percentages based upon respondents’ answers. I qualified these statistics in combination with analyzed themes found in the narrative responses and cognitive interviews to identify potential future responses regarding pedagogical strategies and gaps that might appear a full-scale study.

Results

In this validation and pilot study, I asked two research questions that pertained to the creation of a choral educator questionnaire. (1) What items should be included that investigate choral teachers’ vocal pedagogy attitudes and timbrel choices, pedagogical impacts on vocal health, and their use (if any) of culture bearers? (2) To what extent is the developed questionnaire valid, reliable, consistently comparable, and well-constructed?

Cognitive Interview Results

The initial survey consisted of 24 items organized into 7 sections. The revised survey expanded to 31 items over 9 sections, and 19 total items received edits based upon participant responses. In Table 2 on the next page, I summarized the revisions to each section. Each of the nine sections of the survey included instructions to the survey-taker. The first section consisted of a welcome and overview. Three out of five interviewees acknowledged not reading the instructions, however, all five agreed to keeping them. Two cautioned that instructions remain descriptive rather than include critical information. The next three sections solicited demographic information related to schooling, institutional information, and professional practices. They included 11 total items. Initially a singular section of 9 items constituted the demographic portion of the survey. Four items related to institutional information (socio-economic status, diversity make up, type of institution, and choral pro-

Table 2.
Summary of Revisions

Section	Revisions
Welcome and Overview	None
Demographics: 9 items	11 items. I split these items into three sections: Schooling & Training, Institutional Information, and Professional Practice.
Vocal Pedagogy Choices: 3 items	3 items. In this now fifth section, I clarified frequency statements.
Vocal Health and Wellness: 2 items	2 items. In this now sixth section, I clarified verbiage and response language.
Vocal Tone Choices: 3 items	3 items. In this now seventh section, I clarified verbiage and response language.
Comfortability: 7 items	10 items. In this now eighth section, I added items about culture bearer usage and an item to mitigate potential bias.
Short Response: 2 items	2 items. In this now ninth section, I changed language in item 1 for open-endedness and clarified language in item 2.

gram size) were added and three items about schooling were condensed into two. Initially all items but one required multiple-choice responses. The two survey-experienced participants suggested edits in response styles so that certain items yielded continuous rather than categorical data. One item required users to list content-related resources.

Section five consisted of vocal pedagogy-related items formatted in Likert-style responses. These items were adaptations from Grady & Brunken's 2022 survey, where researchers asked how strongly respondents agreed they talked about certain aspects of vocal pedagogy. Grady & Brunken asked for an estimated percentage of frequency across total rehearsal time. I oriented my questionnaire towards specific pedagogies and the frequency of their use. One participant remarked that the item discussing resonance lacked an option for teaching about vocal acoustics. I added this option. Additionally, in this section of the survey I examined the frequency with which choral educators used certain pedagogical choices when teaching singing. After reviewing the three educator transcripts, a common conflict between frequency and importance emerged. Based upon the response options of "most of the time," "often," "sometimes," "rarely," and "never," all three participants gravitated

towards “most of the time” and “often” and away from the other options. To me, this indicated importance superseding frequency of the strategies as it seems unlikely that each educator utilized all five to seven (depending on the item) strategies each class period. To better guide the responses, we discussed clarifying the term “frequently.” I added the phrase “Consider the average day-to-day in your classroom” to all three items.

Section six consists of two items related to vocal health and wellness. In each item prompt, I changed the verb “rate” to “rank” as suggested by an interviewee. Survey respondents prioritized pedagogical choices and therefore could only choose the highest level of prioritization once. These items consisted of adaptations (Daugherty et al. 2011; Grady & Brunken, 2022;) that cross-examined vocal health issues with specific vocal health pedagogical choices. I eliminated the issue of “decreased vocal range” after two of the three choral educator interviewees agreed that it caused them to think more about vocal training rather than vocal health maintenance. I also added the term “conditioning” to pedagogical choices after one interviewee remarked that many educators not only “warm-up,” but “warm-down” their choirs.

In section seven I also asked survey respondents to rank responses, in this case related to vocal tone choices. I again changed the verb “rate” to “rank” to better reflect the process of prioritization. I also added the clarifier “artist intent” to one response option because one choral educator interviewee remarked that when teaching popular music, they often considered the original artists’ interpretation over popular style or popular music as a genre.

Section eight consisted of prompts and questions that gauged educator comfortability with issues of vocal health, and programming/teaching unfamiliar music. Based upon interviewee responses, I added three questions to this section. I did not originally include a question that directly asked whether educators used outside culture bearers. Similarly, two educator participants noted their use of students as culture bearers. I added two questions that asked whether teachers collaborated with outside culture bearers, and whether teachers collaborated with students as culture bearers. The third added question offered survey respondents the opportunity to select strategies they consider important when teaching unfamiliar repertoire. One of the survey-expert participants remarked the inherent biases in this section that might lead respondents to the conclusion that best practices included collaborating with a culture bearer. They admitted the difficulty in asking questions about a subject without underscoring its seeming importance. By adding this third question, I attempted to mitigate issues of bias and leading of respondents.

The ninth, and final, section included two short response questions. All five interviewees agreed upon the revised, open-ended language of the first question. Originally the language asked specifically about barriers to collaborating with culture bearers. I changed it to “hesitations in teaching musical traditions outside of the ones you were raised in or learned about in school.” The final question existed for the piloting phase only and allowed for feedback on questionnaire design and content. Initially the question prompted general feedback. One interviewee suggested I clarify the question by adding “design and content.”

Overall Validity

Throughout each cognitive interview, I periodically asked about issues of bias, leading and misleading language, and fairness of questions (Desimone & Le Floch, 2004; Stone, 1993). I wanted to know how interviewees felt and how they imagined future respondents might feel taking the survey; whether respondents might feel pressured to give socially acceptable responses over honest ones (Desimone & Le Floch, 2004). Regarding the five non-demographic sections of the questionnaire, four out of five participants felt the items did not contain biased, leading, or unfair aspects. One participant helped me work through the inherent bias regarding collaborating with culture bearers in the eighth section. The three choral educators all positively noted the thought-provoking, reflective nature of the questions and the perceived usefulness of their potential results. Additionally, they shared a sentiment that individual survey takers may, because of the experience, possibly reevaluate their pedagogical practices. Although changing pedagogical habits falls outside the aims of this validation study, this feedback suggests potential implications for a larger-scale utilization.

Piloting Results

All participants ($N = 9$) completed the revised questionnaire. One participant did not answer a question related to vocal health and wellness. They did not offer a reason as part of their comments. A final short answer question solicited feedback on the content and construction of the questionnaire. One respondent commented erroneously, confusing one set of instructions for another. One respondent shared their positive experience taking the survey. All others (7/9) chose not to respond. Due to the poor response rate, I eliminated this question from the final edition of the questionnaire.

Results from the piloting phase came from a sample too small to represent choral music educators at-large. Briefly, these individuals ($N = 9$) provided the following data. When employing specific strategies to teach vocal techniques related to breathing, phonation, and resonance, they most frequently employed kinesthetic prompts over imagery, emotional, or voice science-based prompts. As required knowledge in voice science increased, pedagogical frequency of use decreased. In terms of vocal health, the piloting educators ranked teaching about hydration, vocal/physical conditioning, and sleep/rest as most important. In addition, they prioritized addressing vocal strain above other potential indicators of poor vocal health. These educators felt comfortable overall addressing issues of vocal health when it came to mild and temporary vocal and non-vocal concerns.

I asked participants to prioritize aspects of vocal timbre related to specific types of music by ranking pedagogical choices that impact choral tone. When teaching Western Classical repertoire, respondents prioritized building a choral tone and then making timbral adjustments based upon the character of the piece. When teaching familiar, non-Classical

repertoire, participants prioritized making timbral adjustments based upon the character of the piece and then based upon the style/genre/artist intent. When teaching unfamiliar, non-Classical repertoire, participants prioritized bringing in a style expert/culture bearer and making timbral adjustments based upon the character of the piece. These educators felt decreasing comfortability addressing tonal adjustments as the familiarity of repertoire decreased. They cited time/training and authenticity/respect as their greatest hesitations towards teaching unfamiliar music.

When asked about collaborating with culture bearers, the piloting educators reported high comfortability. This comfortability decreased, however, when asked about reinforcing tonal choices taught by the culture bearer and fell again when asked if they would program another piece from the bearer's culture without help. More than half (66.7%) of piloting educators reported collaborating with either an outside or student culture bearer.

Discussion and Final Questionnaire Revisions

The piloting phases yielded optimistic results in terms of validity and reliability. The piloting educators' responses looked akin to the variation found in the three choral educator interviewees. This overall concurrence of responses echoed Messick's call for high content relevance to the subject domain (1989). The first through sixth sections yielded similarly varied responses. While response variation continued successfully in the seventh section, I realized that in the interest of cleaner data collection, I should better align the response choices. Specifically, each item should contain five choices. Therefore, "bringing in a culture bearer or style expert" option now appears in each item. Additionally, each item's choices should align. Specifically, the second option now always contains the terms "culture/language," and the third option now always includes "style/genre/time period/artist intent."

The first two items in the eighth section yielded conflicting and unclear results. The three choral educator interviewees answered similarly to the piloting respondents. They all rated more comfortability in addressing vocal production related issues over mild and temporary non-production issues such as a cold, allergies, or fatigue. This conflicted with self-reporting of both interviewees and pilot respondents that they prioritized teaching strategies for mitigating non-production related vocal issues (sleep/rest, hydration) and deprioritized teaching anatomy and vocal function as a health strategy. In the interviews, all three choral educators immediately assumed acute vocal health issues that would require direct medical attention. The words "mild" and "temporary" were bolded, and clarifying examples were added to the second item to curb this reaction. I suspect, however, a similar "knee-jerk" response occurred in the pilot group as in the interviews. Ambiguous results may present a limitation to the validity of the responses to this one item, perhaps failing Stone's requirement for either intelligibility, non-bias, or unambiguity (1993). The remainder of the items in this section, as well as section 9, yielded consistently varied responses as anticipated. In the final iteration of the survey, I replaced the final question with one that solicits further

participation in virtual focus groups.

Limitations and Conclusion

The primary limitation of this study centered on the reliability and expertise of the participants as well as my own comprehension of the related research. As suggested by Stone (1993), conducting a piloting phase checks for item intelligibility, unambiguity, unbiasedness, and competency—the ability to handle many possible response types. Following these suggestions resulted in a finalized questionnaire presented in Appendix B. Other limitations of this study included the relatively small sample size and its relationship to generalizability. Additionally, while I endeavored to design a survey that yielded more specificity than prior research, the breadth and subsequent length of the survey content excluded some opportunities for deeper probing. Finally, cognitive interviewees brought their own subjectivities, and their responses could not guarantee a perfectly valid and reliable survey instrument. Results of this preliminary study, however, should ameliorate limitations in the large-scale implementation of the questionnaire to a broader population of choral educators.

The pedagogical strategies of choral educators as they pertain to teaching multiple vocal timbres, maintaining vocal health, and engaging with culture bearers is a complex and multi-faceted phenomenon. Unlike most instruments, the voice primarily exists internally and “hidden,” from the musician. Involuntary muscles and the autonomic nervous system largely regulate its use (McCoy, 2012; van Mersbergen, 2014). As such, vocal teachers must rely, to differing degrees, upon myriad scientific, anecdotal, and experiential information to teach singing (McCoy, 2012). Due to the wide range of vocal educator experiences, many varied, and sometimes conflicting, approaches to singing emerge. While a qualitative study about this phenomenon might reveal rich descriptions of specific settings, a quantitative approach may uncover broad trends, gaps, and pathways for more detailed future investigations. By validating and piloting this choral educator questionnaire on vocal pedagogy, I will better collect reliable, consistent, and comparative results that will inform both the field and its future researchers.

References

- Bennett, C. (2021). Teaching culturally diverse choral music with intention and care: A review of literature. *Update*, 40(3), 60-70.
<https://doi.org/10.1177/87551233211051946>
- Bennett Walling, C. (2016). Secondary choral directors' multicultural teaching practices, attitudes and experiences in international schools. *International Journal of Music Education*, 34(2), 196-207. <https://doi.org/10.1177/0255761415584301>
- Campbell, P. S. (2021). *Musica exotica*, multiculturalism, and school music. *Visions of Research in Music Education*, 16, 1-12.
<https://opencommons.uconn.edu/vrme/vol16/iss5/20>

- Culp, M. E., & Salvador, K. (2021). Music teacher education program practices: Preparing teachers to work with diverse learners. *Journal of Music Teacher Education*, 30(2), 51-64. <https://doi.org/10.1177/1057083720984365>
- Culp, M. E., Svec, C., McConkey, M., Edgar, S., Hellman, D. S., Melago, K., Smith, H. (2023). Meeting the social and emotional needs of p-12 learners: A descriptive study of music teacher education programs. *Journal of Research in Music Education*, 1-23. <https://doi.org/10.1177/00224294231174606>
- Darling-Aduana, J. (2021). Development and validation of a measure of authentic online work. *Education tech research dev*, 69, 1729-1752. <https://doi.org/10.1007/s11423-021-10007-6>
- Daugherty, J. F., Maternach, J. N., & Price, K. K. (2011). Student voice use and vocal health during an all-state chorus event. *Journal of Research in Music Education*, 58(4), 346-367. <https://doi.org/10.1177/0022429410387145>
- Desimone, L. M., & Le Floch, K. C. (2004). Are we asking the right questions? Using cognitive interviews to improve surveys in education research. *Educational Evaluation and Policy Analysis*, 26(1), 1-22.
- Edwin, R. (2020). Culture vs. science in voice pedagogy. *Journal of Singing*, 77(1), 81-83.
- Ganschow, C. M. (2013). Secondary school choral conductors' self-reported beliefs and behaviors related to fundamental choral elements and rehearsal approaches. *Journal of Music Teacher Education*, 23(2), 52-63. <https://doi.org/10.1177/1057083713485587>
- Grady, M. L., & Brunkan, M. C. (2022). Teaching what we were taught: A survey of choral music educators on vocal health, anatomy, and pedagogy. *International Journal of Research in Choral Singing*, 10, 136-162.
- Goetze, M. (2017). Repertoire as pedagogy: Music of diverse cultures. In F. A. Abrahams & P. D. Head (Eds.) *The Oxford Handbook of Choral Pedagogy* (pp. 319-343). Oxford University Press
- Hansen, S. A. (2017). On the voice: Singing in ACDA's first city years: Celebrating the "on the voice" chai anniversary (1999-2017). *Choral Journal*, 57(11), 41-57.
- Inoue, T. (2018). Western classical music in a non-Western culture: The repertoires of Japanese professional orchestras in the twentieth century. *Poetics*, 67, 13-25. <https://doi.org/10.1016/j.poetic.2018.02.007>
- Jenkins, C. (2022). Assimilation and integration in classical music education. *Action, Criticism, and Theory for Music Education*, 21(2), 156-81. <https://doi.org/10.22176/act21.2.156>
- Kajikawa, L. (2019). The possessive investment in classical music: Confronting legacies of white supremacy in U.S. school and departments of music. In K.W. Crenshaw (Ed.) *Seeing Race Again* (pp. 155-174). University of California Press.

- Kim, J. (2022). A case study: 30 elementary music education majors' perceptions of preparedness, interest, and comfort teaching choir before and after taking a choral methods course. *International Journal of Music Education*, 40(3), 460-470. <https://doi.org/10.1177/02557614221074056>
- Kratus, J. (2007). Music education at the tipping point. *Music Educators Journal*, 94(2), 42-48. <https://doi.org/10.1177/002743210709400209>
- Lissitz, R. W., & Smauelson, K. (2007). A suggested change in terminology and emphasis regarding validity and education. *Educational Researcher*, 36(8), 437-448. <https://doi.org/10.3102/0013189X07311286>
- Messick, S. (1989). Validity. In R. L. Linn (Ed.), *Educational measurement* (3rd ed.). New York: Macmillan.
- McCoy, S. (2012). *Your Voice: An Inside View* (2nd ed.). Delaware, OH: Inside View Press.
- McCoy, S. (2020). Teaching singing in a post-truth society. *Journal of Singing*, 77(2), 201-204.
- Munce, S. E. P., Guetterman, T. C., & Jaglal, S. B. (2021). Using the exploratory sequential design for complex intervention development: Example of the development of a self-management program for spinal cord injury. *Journal of Mixed Methods Research*, 15(1), 37-60. <https://doi.org/10.1177/1558689820901936>
- Norwood, L., Gregoir, S., Anzaldúa, A., Barber, F., Cisneros-Watson, K., Coleman-Evans, F., DeMore, M., Fox, D., Garrett, M. L. A., Joy-Jenkins, L., Pemberton, D., Spottswood, S., Wanyama, S., & Williams-Johnson, T. (2018). If you don't know, don't assume. *Choral Journal*, 59(3), 32-46. <https://www.jstor.org/stable/10.2307/26600229>
- Porter, A. C., Polikoff, M. S., Goldring, E., Murphy, J., Elliot, S. N., & May, H. (2010). Developing a psychometrically sound assessment of school leadership: The VAL-ED as a case study. *Educational Administration Quarterly*, 46(2), 135-173. <http://www.doi.org/10.1177/1094670510361747>
- Regier, B. J., Scherer, A. D., Silvey, B. A., & Baughman, M. (2022). Undergraduate choral conducting courses: Examining students' practice behaviors and instructors' pedagogy. *Journal of Music Teacher Education*, 31(3), 66-80. <https://doi.org/10.1177/10570837221076382>
- Rodríguez, F. C. (2022). Echoes from *Fight Club*: Categorical thinking, narrative strategies, and political radicalism in Chuck Palahniuk's *Adjustment Day*. *Journal of English Studies*, 20, 3-23. <https://doi.org/10.18172/jes.5538>
- Saldaña, J. (2021). *The coding manual for qualitative researchers* (4th ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Salvador, K., & Kelly-McHale, J. (2017). Music Teacher Educator Perspectives on Social Justice. *Journal of Research in Music Education*, 65(1), 6-24. <https://doi.org/10.1177/0022429417690340>
- Stefanova, D., & Speed, A-M. (2023). 'Le Mystère des voix bulgares' – Traditional Bulgarian singing and Estill voice training® [Conference Presentation]. 11th Estill World Voice Symposium, Vienna, Austria.

- Stone, D. H. (1993). Design a questionnaire. *BMJ*, 307(6914), 1264-1266.
<https://doi.org/10.1136/bmj.307.6914.1264>
- Tashakkori, A., Johnson, R. B., & Teddlie, C. (2021). *Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences*. Thousand Oaks, CA: Sage Publications, Inc.
- van Mersbergen, M. (2014). Viva la vagus! *Choral Journal*, 55(3), 67-33.
<http://www.jstor.org/stable/24335810>
- Williams, D. A. (2011). The elephant in the room. *Music Educators Journal*, 98(1), 51-57.
<https://doi.org/10.1177/0027432111415538>
- Wolverton, V. D. (1989). The high school choral director as voice teacher. *Choral Journal*, 29(9), 23-26. <http://www.jstor.org/stable/23547511>
-

Appendix A: Cognitive Interview Protocol

Thank you for agreeing to meet with me today and for helping me validate a questionnaire. This interview will be audio recorded both here on Zoom and through the voice memos application on my phone. Please know that you are welcome to discontinue this interview at any time and that this interview dialogue, as well as your personal information, will be kept confidential. If mentioned in any written or presented materials, I will refer to you as an interviewee or participant, not by any personally identifying information. This is to both safeguard your confidentiality and to allow you to speak freely and honestly. We will engage in what's called a "cognitive" or "think-aloud" interview. The "think-aloud interview" is one in which respondents talk through their thought process as they answer questions on a survey. Respondents are encouraged to engage in a running commentary of everything that occurs to them as they are working through an item—what is a clear and accurate reflection of their experience, what is ambiguous or awkward, and what is absent from the item. After completing an item, respondents may be probed further by the interviewer.

Example Questions from the interviewer:

- a. Where you able to comprehend "x" statement/question?
- b. When you said, "x," what did you mean?
- c. Could you elaborate further on "x" response?
- d. Could you describe your reaction to "x" statement/question?
- e. Do you feel "x" statement/question read fairly and professionally?

- f. Could you provide some feedback on “x” aspect of the questionnaire?
- g. After completing the questionnaire, what (if anything) would you change/add/omit?
-

Appendix B: Final, Revised Questionnaire

Section 1: Welcome and Overview

Thank you for your participation in this study of choral directors’ experiences with issues of vocal timbre, style, pedagogy, and health. By filling out this questionnaire, you are advancing research that investigates the intersection of vocal pedagogy and choral pedagogy practices. There are nine sections. Please take your time responding to each portion of the questionnaire.

Section 2: Demographic Information – Schooling & Training

Instructions: In this section we ask that you provide basic demographic information related to your professional and academic experience as related to vocal pedagogy.

Item 1: What is your highest completed level of education?

Undergraduate or Associate Degree, Masters Level Degree,
Doctoral Level Degree, Alternative or non-degree certification, Other

Item 2: Have you taken any courses related to the areas of study listed below? Please select all that apply.

Vocal Pedagogy (including anatomy, physiology, voice science); Diction (including the International Phonetic Alphabet); Acoustics or Physics of Sound; Other

Item 3: In what settings did you take this or these course(s)? Please select all options that apply.

Required as an undergraduate; Elected as an undergraduate; Required as a graduate student; Elected as a graduate student; In a workshop, conference, or continuing education; Only in a workshop, conference, or continuing education

Section 3: Demographic Information – Institutional Information

Instructions: In this section, we ask you to provide basic demographic information related to your place of work.

Item 4: Type of Institution. Please check all that apply.

Middle School, High School or Secondary School, College or University, Other

Item 5: Choral Program Size. Enter a number (approximation is okay). If you teach at more than one institution, please select the largest program size.

Item 6: Program Diversity (which may differ from your school overall)

Almost exclusively White or Caucasian, majority White or Caucasian, majority Non-White, almost exclusively Non-White

Item 7: How would you describe the average socio-economic status of the students in your choral program?

High socio-economic status on average, medium socio-economic status on average, low socio-economic status on average

Section 4: Demographic Information – Professional Practice

Instructions: In this section, we ask you to provide basic demographic information related to your professional practice.

Item 8: How many years of teaching experience do you have?

1 or fewer, 2 to 5 years, 6 to 10 years, 11 to 20 years, 21 or more years

Item 9: Are you involved with teaching a musical, or musical theater style class as part of your employment?

Yes, no, other

Item 10: Do you coach or advise a student led a capella group, or other “non-traditional” vocal activities as part of your employment?

Yes, no, other

Item 11: Please list any choral pedagogy/vocal pedagogy/teaching textbooks you may currently use (Title, Author). Write N/A if this does not apply.

Section 5: Vocal Pedagogy Choices

Instructions: In this section we ask you to consider how frequently you make certain pedagogic choices as related to the voice.

Item 12: When teaching about breath for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

Frequency: Never, rarely, sometimes, often, most of the time

Choices: Imagery; emotional language; kinesthetic prompts; teaching how the lungs and diaphragm work; teaching how to manipulate abdominal, or other voluntary muscles for breathing.

Item 13: When teaching about phonation for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

Frequency: Never, rarely, sometimes, often, most of the time

Choices: Imagery, emotional language, kinesthetic prompts, teaching about the vocal folds and their function, teaching about other laryngeal structures and their function

Item 14: When teaching about resonance for singing, how frequently do you employ the choices below? Consider that average day-to-day in your program.

Frequency: Never, rarely, sometimes, often, most of the time

Choices: Imagery, emotional language, kinesthetic prompts, teaching about the soft palate, teaching about the jaw or lips, teaching about the tongue placement, teaching about other pharyngeal and laryngeal structures, teaching about vocal formants and frequencies

Section 6: Vocal Health and Wellness

Instructions: In this section we ask that you rank the importance of certain pedagogical decisions about vocal health and wellness. Consider your daily or weekly teaching practices, not specific or severe situations. While you may feel that certain options carry equal importance, we ask you to carefully consider each and prioritize accordingly.

Item 15: When teaching basic vocal health and wellness with your students, which of the below factors do you prioritize? Please rank each factor using 5 as the most prioritized, and 1 as the least prioritized.

Hydration, sleep or rest, drug and alcohol use, vocal or physical warmups or conditioning, knowledge about vocal anatomy or function

Item 16: When mitigating issues of vocal health and wellness with your students, which of the below issues do you prioritize? Please rank each factor using 5 as the most prioritized,

and 1 as the least prioritized.

Throat clearing, breathy sound, vocal strain, vocal fatigue, hoarseness or throat pain.

Section 7: Vocal Tone Choices

Instructions: In this section we ask you to consider pedagogical choices when it comes to vocal tone. While you may feel that certain options carry equal importance, we ask you to carefully consider and prioritize accordingly.

Item 17: When teaching and performing traditional choral repertoire (Western Classical) what tonal or timbral choices do you enact? Rank 5 as your most important and 1 as your least important.

Building or maintaining a choral tone; making timbral adjustments based upon language; making timbral adjustments based upon time period, style, genre, or artist intent; making timbral adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Item 18: When teaching and performing non-Classical repertoire of a familiar culture, style, or genre (Broadway, Jazz, pop, show choir, country, spirituals, American folksong etc.) what tonal or timbral choices do you enact? Rank 5 as your most important and 1 as your least important.

Building or maintaining a choral tone; making timbral adjustments based upon language; making timbral adjustments based upon time period, style, genre, or artist intent; making timbral adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Item 19: When teaching and performing non-Classical repertoire from unfamiliar cultures, languages, styles, or genres, what tonal or timbral choices do you enact? Rank 5 as your most important and 1 as your least important.

Building or maintaining a choral tone; making timbral adjustments based upon language; making timbral adjustments based upon time period, style, genre, or artist intent; making timbral adjustments based upon the character of the piece; bringing in a style expert or culture bearer

Section 8: Comfortability

Instructions: In this section we ask you to rate your comfortability with various teaching scenarios that relate to vocal health, and timbral or tonal issues related to style, genre, or culture.

Item 20: A singer in your class presents with a mild vocal health issue that is obviously related to their vocal habits. How comfortable do you feel helping them manage their vocal health during this time.

5-point rating scale with anchors not comfortable at all and very comfortable

Item 21: A singer in your class develops a mild and temporary vocal health issue that does not stem from their vocal habits. How comfortable do you feel helping them manage their vocal health during this time? They may have a cold, be tired, be experiencing allergies, slightly hoarse or breathy etc.

5-point rating scale with anchors not comfortable at all and very comfortable

Item 22: You've programmed a choral arrangement of a famous pop or Broadway tune for your choir, show choir, or a cappella group. How comfortable do you feel in your ability to help them sound more like the original style?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 23: You would like to program a piece in an unfamiliar foreign language or from a non-Classical tradition. How comfortable do you feel in your ability to help them sound like the musical traditions outside of the USA?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 24: You are preparing to teach a piece in an unfamiliar language or from a non-Classical tradition. Which of the following strategies would you feel are most important? Please check all that apply.

Listen to recordings by the publisher or online, use pronunciation guides from the publisher or online, consult with your students who speak that language or are of that tradition, rely upon an expert or culture bearer, other

Item 25: You have access to at least one expert or culture bearer of the musical tradition you're unfamiliar with. How comfortable do you feel bringing them in to lead the teaching of this musical tradition?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 26: The expert or culture bearer you've brought in asks that your students make tonal or timbral choices that are noticeably different from the ones you've taught or know how to teach. How comfortable are you with incorporating or reinforcing those choices?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 27: After successfully working with your expert or culture bearer how comfortable do you feel programming another piece from that musical tradition without bringing the individual (or another expert or culture bearer) back again as leader or collaborator?

5-point rating scale with anchors not comfortable at all and very comfortable

Item 28: Have you collaborated (in person or virtually) with an outside style expert or culture bearer in selecting or teaching music?

Yes, No

Item 29: Have you collaborated with a student in your class as a style expert or culture bearer in selecting or teaching music?

Yes, No

Section 9: Short Response

Instructions: Please answer each prompt briefly

Item 30: Do you feel any hesitations in teaching musical traditions outside of the ones you were raised in or learned about in school? If so, would you please describe these hesitations.

If not, please write N/A.

Item 31: If you would like to participate in an online focus group related to this study, please list your preferred email contact. Note that by supplying your email address, it may be possible to connect your survey answers with your contact information.
