

Individual Vocal Practice Habits of Barbershop Chorus Singers: A Mixed-Methods Investigation

Context

Various studies have investigated individual practice habits of musicians in populations like expert vocalists, university music students, and instrumentalists (Araújo, 2016; Byo and Cassidy, 2008; Hallam, 1995; Hallam, 2001; Hallam et. al, 2020; Nielsen, 2004; Pike, 2017; Summit and Weidner, 2022). I will address a gap in the literature and adapt Summit and Weidner's (2022) study to investigate this research question: What are the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal in terms of time, structure, objectives, strategies, and resource usage? All research will be conducted virtually via Google Forms and Zoom video calls.

Justification

The barbershop community consists of tens of thousands of passionate singers worldwide, most of whom anecdotally are avocational singers and lack substantial vocal training outside of their barbershop experience. Previous research has focused on instrumentalists or on vocalist populations with substantial levels of training and education, so the extant literature likely does not translate well to the barbershop population. A study focused on the barbershop population is warranted to be able to discern key areas of opportunity for this population in terms of individual practice habits.

Intended Impact

This study will reveal strengths and areas of opportunity for growth in the effectiveness and efficiency of barbershop chorus singers' individual vocal practice. It will also allow barbershop chorus leaders, like myself, who are key music educators in barbershoppers' lives and have limited visibility into their approach to individual vocal practice, to develop strategies to offer singers additional education and resources to address these opportunities for growth.

Methods/Project Design

I will review the literature related to musicians' practice habits, emphasizing studies of vocalists, choristers, barbershoppers, and avocational musicians. Literature related to general practice or skill-building, pedagogy, education and neuroscience may also be discussed, along with literature related to survey, interview, and data analysis best practices.

I will then conduct a mixed methods study consisting of two parts. I will develop a survey featuring both quantitative and qualitative questions and collect responses electronically. The survey will conclude by asking

respondents about their willingness to participate in a follow-up interview. I will select a subset of willing respondents whose responses warrant further interrogation and conduct a Zoom interview with them. The interviews will be semi-structured, allowing for some flexibility to discuss the individuals’ experience organically, while still allowing for sound comparison between interview responses and generation of themes.

Project Timeline

Task Number	Task Title	Start Date	End Date	Duration (Days)	Week Number																											
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	Project Definition and Planning	2024-08-01	2024-10-21	81																												
1.1	Prepare and Submit Ethics Application	2024-08-01	2024-08-19	19																												
1.2	Refine Research Question	2024-08-20	2024-10-01	42																												
1.3	Draft Project Design	2024-10-01	2024-10-21	21																												
1.4	Prepare and Submit Project Proposal	2024-10-01	2024-10-21	21																												
2	Literature Review	2024-09-01	2024-10-31	61																												
2.1	Literature Review	2024-09-01	2024-10-31	61																												
3	Survey	2024-11-01	2024-11-30	30																												
3.1	Draft Participant Consent Forms	2024-11-01	2024-11-07	7																												
3.2	Draft Survey	2024-11-01	2024-11-07	7																												
3.3	Invite Potential Participants to Complete Survey	2024-11-08	2024-11-14	7																												
3.4	Survey Data Collection	2024-11-14	2024-11-30	17																												
4	Interviews	2024-12-01	2024-12-15	15																												
4.1	Identify Respondents to Invite to Follow-Up Interviews	2024-12-01	2024-12-07	7																												
4.2	Draft Follow-Up Interview Questions	2024-12-01	2024-12-07	7																												
4.3	Conduct Follow-Up Interviews	2024-12-08	2024-12-15	8																												
5	Analysis and Write-Up	2024-12-15	2025-01-31	47																												
5.1	Data Analysis	2024-12-15	2024-12-31	17																												
5.2	Write Draft of Results Write-Up	2025-01-01	2025-01-16	16																												
5.1	Revise Results Write-Up	2025-01-16	2025-01-31	16																												

Ethics and Insider Research

This research does not involve physical or face-to-face contact with participants, so the primary ethical concerns of conducting the research are properly obtaining informed consent for each participant, maintaining data security and participant confidentiality, and using clear, concise, and unemotional language that minimizes risk biasing responses or triggering emotional distress in the participants.

Additionally, I am an insider in my barbershop ensemble coaching practice. I have a relationship with the members of all ensembles with whom I am privileged to work, and I know many of these ensembles’ members well. I need to critically assess my relationships with the people participating in my research to identify sources of possible bias, especially in qualitative components, and mitigate them to the greatest extent possible through meticulous reflection. I have also sung in ensembles myself for over eighteen years and in barbershop ensembles, specifically, for over nine years. I must ensure that my personal experience does not result in me leading my research participants toward any particular responses, or skew my analysis toward confirming my personal biases developed through my ensemble singing experience.

Individual Learning Outcomes

- Identify areas of strength in barbershop chorus singers’ individual vocal practice
- Identify areas of opportunity for improvement in barbershop chorus singers’ individual practice
- Develop strategies to offer singers additional education and resources to address the opportunities for growth identified.

Individual Vocal Practice Habits of Barbershop Chorus Singers: A Mixed-Methods Investigation

Introduction

Barbershop is not a distinct musical genre, but rather “a style of arranging in close, four-part, a cappella harmony” (Barbershop Harmony Society, 2020) that features several characteristics that distinguishes it from other four-part a cappella music, including secondary-dominant chord progressions, a primarily homorhythmic texture, and an inside-voice melody with harmony parts both above and below (Barbershop Harmony Society, 2020; Society Contest and Judging Committee, Barbershop Harmony Society, 2023). More relevant for this study is the barbershop community, made up of tens of thousands of passionate singers worldwide who are members or affiliates of nonprofit organizations such as the Barbershop Harmony Society, Sweet Adelines International, and Harmony, Incorporated, whose missions focus around preserving and promoting barbershop music.

There is a substantial body of research on musicians’ individual practice habits in populations like instrumentalists, expert vocalists, and university music students. However, such habits of practitioners of barbershop music, known as “barbershoppers,” have not yet been studied. Furthermore, it is likely that barbershoppers’ individual practice habits differ notably due to key differences from the populations previously studied. Beyond practicing a unique style of music, anecdotally, most barbershoppers are avocational singers, many of whom lack formal musical or vocal training beyond their barbershop experience. This positions barbershop choral leaders as influential music educators in their singers’ lives whose advice shapes their vocal technique and practice habits. Barbershop choral leaders have limited visibility into their singers’ vocal practice outside of rehearsal, so there may be unknown inefficiencies in how they are learning music and practicing singing for their ensembles. To the extent that these inefficiencies exist, there may be ways for barbershop choral leaders to address them by providing their singers additional education and resources.

This mixed methods study addresses the aforementioned gap in the literature and adapts Summit and Weidner’s (2022) work to investigate this research question: What are the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal in terms of time, structure, objectives, strategies, and resource usage? It aims to reveal strengths and areas of opportunity for growth in the effectiveness and efficiency of barbershop chorus singers’ individual vocal practice, and also to allow barbershop chorus leaders to develop strategies to offer singers additional education and resources to address these opportunities for growth.

Literature Review

How, Tan, and Miksza (2022) reviewed the literature related to musicians' practice habits, finding 296 relevant articles dating back to 1928. These studies investigated a variety of topics related to musical practice, but only nine examined vocalists in particular, and even fewer studied vocalists' individual practice (Summitt and Weidner, 2022), making the most pertinent body of research for this study much narrower.

Musical Practice Exercises and Strategies

Time spent by instrumentalists on deliberate practice, or “activities that have been found most effective in improving performance” (Ericsson, Krampe, and Tesch-Römer, 1993, p. 367), that is intentional and well-structured positively correlates with musical achievement (Sloboda *et al.*, 1996; Barry, 1990; Duke, Simmons, and Cash, 2009; Miksza, 2006; Miksza, 2007; Miksza, 2011). While none of these studies included vocalists as participants, the principle of deliberate practice is not exclusive to music, so these findings likely generalize to vocal music generally and barbershop specifically.

Prichard (2012) proposed a method of instructing middle school ensemble musicians on how to practice independently, featuring both cognitive and live modeling and instruction on strategies that positively correlate with performance, which “provides young musicians with a system for thinking about musical problems as well as executing practice strategies successfully” (p. 62). Later studies showed that musicians who received instruction on musical practice were more strategic in their practice and had a wider variety of defined objectives (Prichard, 2021; Weidner, 2021). Like the students on which Prichard (2012) focused, barbershoppers anecdotally tend to lack significant formal music training and education. Thus, barbershop chorus leaders may find a similar framework useful in educating their singers on how to approach individual practice, and modeling these behaviors in rehearsals may increase the likelihood that singers employ effective strategies in their individual practice. Since Prichard's (2012) framework is geared toward young students who are early in their musical training, strategies recommended therein such as slow practice, a whole-part-whole approach, and listening back to recordings of practice and performing self-assessments are likely to translate well to barbershop singers who similarly tend to lack substantial formal music training or education.

Summitt and Weidner (2022) surveyed 79 university voice professors and professional choral singers on their vocal practice, finding a variety of approaches in terms of frequency and duration of practice, as well as strategies employed. Most commonly, respondents rehearsed errors until they were corrected, repeated sections of the piece, and marked their sheet music, which are strategies similar to those studied in the instrumental practice literature. This study included exclusively experienced musicians who had professional-level music education and/or performance experience and did not include avocational singers, so the findings may not generalize well to the barbershop community, very few of whom likely have such experience and hence likely have less knowledge of effective practice strategies. Additionally, barbershoppers tend to sing as a leisure activity rather than a profession, so they may have notably different goals and ambitions than Summitt and Weidner's (2022) participants who sing for a living, and therefore may approach

their singing practice differently. A similar study focusing on barbershop chorus singers would serve as an exploratory data collection on the individual vocal practice habits of this thus-far unstudied population, while also allowing for comparisons in approaches to individual practice to the professional vocalists studied in Summitt and Weidner (2022).

Vocal Warm Ups and Cool Downs

While research is limited, vocal warm ups have been shown to increase acoustic efficiency in singers by reducing extralaryngeal muscle activity (Savareh *et al.*, 2023), and improving acoustic measures of voice quality like jitter and shimmer (Castillo-Allendes, Cantor-Cutiva, and Hunter, 2024) and harmonic-to-noise ratio (Amir, O., Amir, N. and Michaeli, 2005). Vocal cool-downs following singing have also perceived vocal benefits (Ragan, 2016), and vocal cool downs involving semi-occluded vocal tract exercises (SOVTEs) may mitigate vocal inefficiencies associated with vocal fatigue (Fujiki, Huber, and Sivasankar, 2021), although more research is warranted to confirm that specific impact.

Various studies have shown that most vocalists regularly perform vocal warm ups prior to singing, while performing vocal cool-downs after singing is much more uncommon (Gish *et al.*, 2012; Donahue *et al.*, 2014; Reckers, Donahue, and LeBorgne, 2021). Warm up regimens vary widely in terms of duration and specific strategies, with most singers spending between five and ten minutes warming up, and employing vocal exercises such as scales, arpeggios, and glissandi, along with exercises focused on breathing, posture, and muscular stretching/relaxation (Gish *et al.*, 2012). These studies focused on voice students, musical theatre students, and professional singers, populations with substantial formal voice training and singing experience. Singers with less formal training and experience may approach vocal warm ups differently, so these findings may not generalize well to the population of barbershop chorus singers.

Methodology/Methods

My research follows the pragmatic paradigm, since my field of interest, barbershop singing, is a performing art whose technique and pedagogical methods have been informed by scientific fields like voice science and neuroscience. Given barbershop vocal pedagogy's place at the intersection of art and science, a blend of postpositivist and constructionist approaches are appropriate to investigate the research question: What are the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal in terms of time, structure, objectives, strategies, and resource usage? Through investigating this question, I aimed to accomplish the following learning outcomes:

1. Identify areas of strength in barbershop chorus singers' individual vocal practice
2. Identify areas of opportunity for improvement in barbershop chorus singers' individual practice
3. Develop strategies to offer singers additional education and resources to address the opportunities for growth identified.

My mixed-methodology study featured two data collection phases. The first was a survey, modeled after the Vocal Practice Survey (VPS) utilized in Summitt and Weidner (2022), adapted for a barbershop-specific context (Appendix 1). The second was a semi-structured interview with a sample of survey participants (Appendix 2). This approach allowed me to understand how barbershop chorus singers approach their individual practice by collecting quantitative data on many aspects of participants' vocal practice, including on questions utilizing Likert-Type Scales (Sullivan and Artino, 2013). I was also able to study what influences barbershoppers to approach practice the way they do by collecting open-ended responses in the survey and from interview participants. I considered conducting a focus group style interview instead of individual interviews, but opted for interviews to ensure I would get a comprehensive view of each interviewee's vocal practice without risk of bias from other interviewees' comments.

Survey

My survey is based on Summitt and Weidner's (2022) VPS and I kept questions and response options consistent where possible to allow for the most robust possible comparisons between their results and mine. However, I selectively modified the survey to make it more applicable to a barbershop-context. I reworded some strategy options presented to respondents to better align with terminology utilized within the barbershop community (e.g. "cool down" instead of "warm down"). I also added other strategies that are anecdotally common among barbershoppers (e.g. practicing with a learning track) and introduced a 'Not Sure' option for all strategies, understanding that participants without significant musical education or training may be unfamiliar with some of the strategies that Summitt and Weidner (2022) originally studied. These modifications arguably impact the validity of my comparisons to Summitt and Weidner's (2022) findings. Conversely, leaving the options as phrased by them also arguably may have caused confusion among barbershoppers, which would have also skewed results. Lastly, I added additional questions to understand things like motivations for practicing, obstacles to practicing, and to what extent barbershop choral leaders instruct singers on how to efficiently learn music and practice singing.

My population of interest was adults who are active members of one or more barbershop choruses. I posted an invitation to complete the survey in two popular barbershop music Facebook Groups, 'Let's talk (barber)shop.' and 'Barbershop Harmony,' and also emailed a contact email address for 1,147 chapters of the Barbershop Harmony Society (BHS), Sweet Adelines International (SAI), and Harmony, Incorporated (HI) that had such an email address publicly available, asking them to invite their members to participate. 226 participants responded to the survey, over half of which ($n = 125$) were BHS members, with SAI ($n = 87$) and HI ($n = 35$) also being well-represented, and a small number of respondents reporting membership in other North American ($n = 23$) and Non-North American barbershop organizations ($n = 9$).

About 57% of respondents ($n = 128$) were women, 41% ($n = 93$) were men, and 1% ($n = 3$) were gender-diverse. About 94% of respondents ($n = 211$) were at least 30 years old, with about two thirds ($n = 150$) being at least 50 years old. A majority of respondents ($n = 132$) were employed at least part-time, while over one third ($n = 83$) were retired. Only about 4% of respondents ($n = 9$) were students.

About three quarters of respondents ($n = 169$) reported being members of only one barbershop chorus, with the remainder being members of multiple. Only about 10% of respondents ($n = 21$) reported currently being or training to be a professional musician, and less than 35% ($n = 78$) had completed undergraduate or higher level coursework in music or a related subject, with less than 10% ($n = 20$) holding a music-related degree. This is consistent with anecdotal evidence that most barbershoppers are avocational musicians, many of whom lack formal music training or education.

Respondents reported a wide variety of experience singing in barbershop choruses ranging from less than one year ($n = 14$) to over 30 years ($n = 41$) of experience. Most respondents also had experience singing in barbershop quartets ($n = 192$) and non-barbershop ensembles ($n = 191$), while fewer had directed barbershop choruses ($n = 54$) or non-barbershop vocal ensembles ($n = 59$) or coached barbershop ensembles ($n = 55$). Respondents also had experience in a variety of other genres or styles of music, most commonly contemporary choral ($n = 145$) and contemporary a cappella ($n = 133$).

Over half of respondents ($n = 124$) were willing to be interviewed if selected. I utilized stratified random sampling to select interview candidates, based on their history with voice lessons (less than one year versus one or more years) and the frequency with which they compete in barbershop contests and the type of ensembles with which they compete (does not compete annually, competes annually in a chorus only, or competes annually in a quartet).

I administered the survey electronically via Google Forms and only collected personally-identifiable information (name and email address) from those who signaled willingness to participate in a follow-up interview, so I could contact them. I collected survey responses from November 14-30, 2024. I analyzed quantitative survey data using R and used Thematic Analysis (Clarke and Braun, 2017) to analyze open-ended survey responses to identify themes.

Interviews

I randomly selected three individuals from each subpopulation shown in Table 1 and invited them via email to schedule an interview. I only interviewed the first person from each subpopulation who responded, for a total of six interviews.

Table 1: Interview Sampling Stratification

Interview Subgroup	Voice Lessons History	Competition Frequency	<i>n</i>
1	Less than one year	Does not compete annually	16
2	Less than one year	Competes annually in a chorus only	28
3	Less than one year	Competes annually in a quartet	15
4	One year or more	Does not compete annually	11
5	One year or more	Competes annually in a chorus only	30
6	One year or more	Competes annually in a quartet	24

Note: The sample sizes above include only survey respondents who were willing to be interviewed.

By having representation from each stratum, I ensured I got to speak with people with a variety of experiences with high-level instruction and coaching at both the individual and ensemble level, experience which may impact how singers approach their individual vocal practice. Singers who have completed at least one year of voice lessons likely have had more experience with employing effective vocal exercises and practice strategies than those who have completed less than one year of lessons. Additionally, competitive barbershop ensembles anecdotally often work with third-party coaches, some of whom specialize in vocal technique. In fact, the barbershop contest experience often culminates with a feedback session with one or more judges, who recommend strategies to address the ensemble's growth opportunities. Singers in more competitive ensembles are more likely than singers who are in less competitive ensembles to have participated in such a coaching session, and thus, are more likely to have been exposed to effective strategies that they could implement independently.

I conducted each interview via a recorded Zoom video call lasting between 23 and 34 minutes. The interviews followed the same general script (Appendix 2), with slight deviations depending on the interviewees' responses and whether they warranted further interrogation. I again employed Thematic Analysis (Clarke and Braun, 2017) to analyze interview transcripts and identify themes.

Ethics

In order to obtain informed consent, I presented each participant with a comprehensive summary of the study and their rights, and confirmed via a Google Form response that they understood the information and consented to participate. Additionally, it was critical to maintain the confidentiality of the participants and the security of their personal data. I stored all data collected in secure cloud storage accessible only to me, and I will delete these data upon completion of the module. I will not reference any personally-identifiable information in this or any other writeup of the results. Instead, I will refer to interviewees by their interview subgroup from Table 1. Finally, I took care to frame the survey questions in a manner that was unbiased and minimized risk of

triggering emotional distress. I sought and received ethical approval from the University of Wales Trinity Saint David prior to contacting participants.

My status as a barbershopper and ensemble singer, as well as my relationship with people in the barbershop community, makes me an insider researcher in my barbershop ensemble coaching practice. For this particular study, the former is my foremost concern, as many of the participants who responded to my survey are anonymous, and I have no prior relationship with most of those who did provide personally identifiable information. In the research phase, I took care to frame the survey and interview questions in as unbiased a manner as possible and to try not to lead my research participants toward any particular responses. In the analysis phase, I also took care to allow the data to speak for themselves, rather than trying to draw conclusions that are consistent with my own personal biases.

Findings/Discussion

Time

Respondents' individual practice habits with regard to time varied widely. About 35% ($n = 80$) reported practicing four or more times weekly, with slightly more ($n = 83$) practicing two to three times weekly. Over 10% reported practicing less frequently than weekly ($n = 24$) (Appendix 14). Roughly seven in ten ($n = 158$) spent 30-60 minutes practicing on days where they practiced, but typical practice session durations ranged from 15 minutes or less ($n = 16$) to over 60 minutes ($n = 36$), with a mean duration of 51.5 minutes (Appendix 16). Compared to expert vocalists, most of whom practiced at least four times weekly and spent about an hour on average practicing (Summitt and Weidner, 2022), barbershop chorus singers tended to practice less frequently and for a shorter duration. Despite this, nearly two thirds of respondents ($n = 148$) felt that they practice enough to meet the musical expectations of their ensembles, and nearly six in ten ($n = 131$) felt that they practice enough to meet their own personal goals.

Respondents most commonly cited other commitments such as family and work obligations as being the primary obstacles preventing them from practicing enough to meet their ensemble's expectations or their own goals, while others cited lack of discipline, underestimating how much practice is needed to meet expectations, and not enjoying practicing individually as much as rehearsing with their ensemble(s) or performing. Interviewee 1 stated that due to family obligations, the vast majority of their practice consists of singing with learning tracks while driving. Speaking about practicing at home, they said "I just don't have time...My kids live with me right now...and my grandkids are like all under the age of seven...I would rather spend time with them than do rehearsal."

The frequency and duration of barbershop chorus singers' individual practice sessions provides context for their practice habits, but previous research suggests that the frequency and duration of practice contribute less to performance quality than the practice strategies utilized (Duke, Simmons, and Cash, 2009), and the authors argue that those working on developing musical skills, rather than focus on practicing for a certain amount of time per day, rather focus on "skillfully identify[ing] and systematically address[ing] the mistakes that

are an inevitable part of learning” (p. 319). Thus, barbershop chorus leaders will likely have more impact by encouraging their singers to employ effective strategies in their practice time than recommending a target duration or frequency of practice, especially given their singers’ busy and highly variable lives outside of barbershop.

Structure and Objectives

As with time, respondents’ individual practice habits also varied widely in terms of structure and objectives. On days where they practiced, over 75% ($n = 174$) typically had only one session in a day, and about six in ten ($n = 138$) had specific, predetermined goals for each practice session (Appendix 15). Most agreed that their practice sessions differed depending on upcoming performance needs and expectations ($n = 196$), needs for musical and technical development ($n = 152$), and their familiarity with the repertoire being studied ($n = 191$). A minority agreed that their practice regimen is consistent ($n = 83$) and that they follow a routine ($n = 87$), while at the same time a minority agreed that their practice sessions have little similarity to one another ($n = 62$) (Appendix 17).

Respondents cited various primary motivations for practicing for their barbershop choruses, most commonly to learn their music ($n = 24$), to pursue personal growth as a singer ($n = 18$), to be a better leader in their ensemble ($n = 12$), and to ensure they meet their ensemble expectations/qualification requirements for upcoming performances ($n = 11$). This suggests that while some barbershop chorus singers are self-motivated, meeting qualification requirements is also a strong incentive for individual practice, so chorus leaders may find that introducing performance qualification requirements, such as required recording submissions, increases their members’ level of preparation outside of rehearsal.

An area of unanimous agreement among interviewees was that their participation in barbershop choruses has helped them improve as a singer. When asked whether this was the case, all enthusiastically responded to the affirmative. Interviewee 5, who has only been a barbershopper for a few months, stated that they “can hear a difference even from...when [they were] first practicing [their] audition track to now.” Interviewee 2 noted that their chorus participation has not only helped them improve as a singer, but has “improved every aspect of [their] life.”

Barbershop chorus singers were significantly less likely than expert vocalists to vary their approach to practice based on upcoming performance needs and expectations or their needs for technical and musical development (Summitt and Weidner, 2022). One possible reason for this relates to barbershoppers’ number one obstacle to practicing more: other commitments. With limited time and energy to commit to individual practice, and other obligations like family and work often taking priority, barbershop chorus singers seem to dedicate much of their individual practice time to learning and memorizing repertoire and ensuring they can execute their part, as evidenced by these being primary motivations for practicing. Others may opt to execute a practice routine they feel works well, rather than investing additional time and energy into exploring alternative structures or developing session-specific objectives. Chorus leaders may increase the likelihood that their singers use their precious individual practice time efficiently by allocating rehearsal time to develop critical

listening skills, perhaps by incorporating a critical listening element to a framework like that Prichard (2012), to help singers identify notable opportunities for their individual growth and use those to inform specific objectives for their practice sessions.

Strategy and Resource Usage

Respondents employed various strategies in their practice (Table 2), most commonly practicing with learning tracks ($M = 3.94$, $SD = 0.98$). This aligns with anecdotal evidence that learning track usage is common in the barbershop community. Other frequently-used strategies included various forms of repetition, listening to relevant audio recordings, and marking sheet music.

Vocal warm ups were fairly common with over half ($n = 117$) of respondents having performed vocal warm ups in at least some of their recent practice sessions. Conversely, vocal cool downs were uncommon with only about 16% ($n = 37$) of having recently performed vocal cool downs. This is consistent with findings from previous research with vocal warm ups being more common than vocal cool downs in other vocalist populations (Gish *et al.*, 2012; Donahue *et al.*, 2014; Reckers, Donahue, and LeBorgne, 2021). Interviewees reported spending between five and twenty minutes warming up for their practice sessions and have a variety of approaches to their warm ups. Four of six perform traditional vocal warm-up exercises like scales, semi-occluded vocal tract exercises, and vocalises, either by themselves or following along with a recorded warm up routine. The remainder sing along with learning tracks to warm up, either using songs that they intend to work on or songs they are already comfortable with. No interviewees reported regularly doing vocal cool downs, and some were entirely unaware of the concept.

Table 2: Frequency of Usage of Various Practice Strategies

Strategy	M	SD	n
Practice with a learning track	3.94	0.98	210
Rehearse errors until corrected***	3.81	0.98	215
Listen to audio recordings † † †	3.67	1.21	220
Repeat whole piece † †	3.58	1.10	215
Repeat short passages	3.45	1.11	220
Mark sheet music***	3.37	1.30	223
Repeat 1-2 Measures**	3.30	1.15	223
Body movement**	3.14	1.28	215
Work on memorization separate from technical and expressive practice	3.13	1.27	221
Work on most difficult sections first***	3.04	1.20	221
Whole-Part-Whole Practice Approach***	2.97	1.28	214
Chaining***	2.91	1.30	219
Use mental practice***	2.84	1.38	215
Review the music before starting each practice***	2.80	1.30	224
Vocally warm up using a predetermined sequence of activities***	2.76	1.35	220
Imagine yourself as a character or in a situation related to the text***	2.60	1.32	216
Set goals for the practice session***	2.60	1.29	223
Alternate slow practice with at tempo practice***	2.60	1.25	223
End practice by singing completely through current repertoire***	2.53	1.40	220
Formally self-evaluate***	2.49	1.37	218
Utilize visual imagery***	2.46	1.34	224
Speak rhythms***	2.36	1.21	224
Clap/tap rhythms	2.29	1.17	223
Practice while playing the piano/keyboard***	2.28	1.21	225
Record audio of practice to review later	2.28	1.27	224
Set long term goals***	2.28	1.25	220
Watch video recordings	2.13	1.08	225
Practice diction separate from melody or rhythm***	2.11	1.11	222
Vary/simplify rhythms***	1.95	1.13	213
Vary/simplify pitch patterns***	1.94	1.19	208
Practice with a metronome***	1.63	0.88	225
Record video of practice to review later	1.58	0.99	224
Vocally cool down at the end of practice***	1.57	0.96	224
Reference a music dictionary***	1.29	0.69	223

Note: Coded responses correspond to None (1), Few (2), Some (3), Most (4), or All (5). 'Not sure' responses were excluded from analysis.

****/† † † Significantly lower/higher than Summitt and Weidner (2022) at 0.01 level of significance*

***/† † Significantly lower/higher than Summitt and Weidner (2022) at 0.05 level of significance*

Of the 30 strategies explored in both Summit and Weidner (2022) and this study, barbershop chorus singers were significantly more likely to listen to audio recordings and repeat the whole piece, and were significantly less likely to employ 25 other strategies, including vocal warm ups and cool downs. Further, a considerable minority claim they do not receive education and resources from their ensemble leaders on how to learn music ($n = 41$) or practice singing ($n = 53$) effectively and efficiently, or are not sure that they do. This supports the notion that barbershop chorus singers' repertoire of practice strategies is narrower than that of expert vocalists, likely due to their relative lack of substantial formal music education or training. In fact, it is possible that chorus leaders providing learning tracks while not discussing other practice approaches is interpreted by some barbershoppers as an assertion that singing along with learning tracks is the best way to practice. Chorus leaders may be able to help close this knowledge gap by allocating rehearsal time to educating their singers on effective individual practice strategies.

Such education may be especially impactful for newer barbershop chorus singers who are most likely to lack this information. Interviewee 4 noted that they have only been singing in their barbershop chorus for a few months, and they are still learning how to best approach their own practice. Interviewee 5 was in a similar situation, having recently joined their chorus, and were primarily focused on learning the repertoire. They noted that they were "still finding [their] way" in terms of developing efficient practice habits. Chorus leaders might consider establishing an onboarding program for new members to help them build effective practice habits from the beginning of their tenure with the ensemble.

Since vocal warm ups are already commonplace in barbershop chorus rehearsals according to interview responses, this may be a good area to pilot a framework like the one proposed by Prichard (2012). Taking time to focus on cognitive and live modeling of each warm up exercise, rather than simply completing the exercise and moving on without further discussion, may increase the likelihood that barbershoppers practice similar warm ups on their own. Once their framework is refined, chorus leaders can then extend it to rehearsing repertoire and model effective practice strategies recommended by Prichard (2012) such as slow practice or whole-part-whole practice, with the goal that their singers become more strategic in their practice. Regularly incorporating vocal cool downs into chorus rehearsals with a similar modeling-based approach could also increase the rate of individual vocal cool down practice, although since cool down adoption is low even in expert singer populations (Summitt and Weidner, 2022), building cool down habits amongst barbershoppers may prove to be difficult. Chorus leaders might also consider creating recordings of warm up and cool down routines for their singers to utilize in their individual practice sessions to try to extend the ubiquity of learning track usage in the barbershop community to other areas of vocal practice.

The most common practice resource utilized by barbershoppers (Table 3) were learning tracks, with nearly everyone ($n = 217$) saying they use them frequently. Other resources frequently utilized by a majority included rehearsal recordings ($n = 143$), pianos ($n = 132$), pitch pipes ($n = 123$), and mobile apps like TE Tuner ($n = 120$). Those who utilized learning tracks reported most commonly practicing with part-dominant tracks ($n = 183$), followed by full-mix tracks ($n = 167$), with part-missing ($n = 132$) and part-isolated ($n = 129$) tracks also utilized by over half of respondents.

Since many barbershop chorus singers struggle to balance practicing for their chorus(es) with other commitments, learning tracks are valuable tools that facilitate passive learning. Interviewee 2 noted that they listen to learning tracks frequently while at work, noting that they “absorb a lot of [their] music that way, and then when [they] actually do try to sit down and sing through them, [they] have a bit more of a reference.” Learning tracks also can become a crutch that some singers lean on for not just a convenient learning aid, but the majority of their practice. Interviewee 2 later acknowledged that “[they’ve] been in conversations with [their] choir directors that maybe [their] strategies haven’t been the best,” and that nearly all of their practice involves singing along with learning tracks, but they have recently been working on implementing different strategies to improve the quality of their practice. Others largely eschew learning tracks for more traditional styles of music learning. Interviewee 6 explained that they utilize learning tracks sparingly early in the learning process to help them get a feel for the song, but do most of their practicing without the tracks. “I know people who say they’ll play it for hours, or they play it in their car - I don’t do any of that,” they said.

Table 3: Frequency of Various Resource Usage

Resource	% That Regularly Utilize Resource	n
Learning Tracks	96.0%	217
Chorus Recordings	63.3%	143
Piano	58.4%	132
Pitch Pipe	54.4%	123
Phone Apps	53.1%	120
Other Ensemble Recordings	35.8%	81
Own Recordings	34.5%	78
Mirror/Phone Camera	27.4%	62
Metronome	20.4%	46
Music Dictionary	1.8%	4
Yoga Balls/Straps	0.4%	1

While six in ten respondents ($n = 139$) reported being in a chorus that employs methods to verify that members are meeting the ensemble’s expectations and the most common such method employed was individual recording submissions, only about 35% of respondents reported regularly utilizing their own recordings in their practice. This suggests that many singers who record themselves as part of their chorus’ requirements are not using those recordings to inform their practice objectives. Chorus leaders might consider encouraging their members to take advantage of the recordings they are already making in their individual practice, whether through required self-assessments or modeling self-recording as a practice strategy in rehearsal as suggested by Prichard (2012). Without a requirement, some singers will likely still not listen to their recordings or not record at all due to the aversion of listening to themselves sing. Interviewee is not required by their chorus leaders to submit recordings, and so they rarely record themselves. “I don’t know of anybody that likes hearing their own voice, and I hate hearing mine,” they said.

Limitations

A key limitation of this study is that it was achieved through a convenience sample. While the sample size is fairly large and appears to be fairly representative of the barbershop chorus singer population across demographics like age and gender identity and barbershop participation variables like organizational membership and barbershop chorus experience, a study with a more rigorous random sampling procedure would yield results that are more likely to generalize across the entire barbershop population. Also, a key assumption of survey and interview research is that respondents are answering completely and truthfully, so any responses that were incomplete and/or dishonest may skew the results. Future research could employ observational techniques to better understand what barbershop chorus singers are actually doing, versus what they claim they are doing.

As noted above, there are limitations to comparisons to Summitt and Weidner's (2022) results. The authors note various limitations to their own study that potentially impact the generalizability of their data. Additionally, comparisons made for results from parts of the survey that I modified should be interpreted with caution, as different wording or response options could have contributed to differences in responses across the two populations.

Conclusion

Barbershop chorus singers, like other singers, approach their individual practice in a variety of different ways in terms of time, structure, objectives, strategy, and resource usage. The duration and frequency of their practice sessions are largely influenced by how busy they are outside of barbershop, with other commitments often taking priority over practice time, although most singers feel they still are able to practice enough to meet their ensembles' musical expectations and their own personal goals. Barbershop chorus singers are less likely than expert vocalists to vary their practice approach based on upcoming performance needs and expectations or their needs for technical and musical development, and are also less likely to employ a large number of standard practice strategies (Summitt and Weidner, 2022), likely due to having less musical education, training, and experience on average. Learning tracks are utilized by nearly all barbershop chorus singers at some point in their learning process and singing with them is an extremely common practice strategy. While a majority of barbershop chorus singers perform vocal warm ups regularly, few perform vocal cool downs.

To increase the effectiveness and efficiency of their singers' individual vocal practice, barbershop chorus leaders should consider educating their singers on key areas of individual vocal practice and musicianship such as critical listening, effective music learning and practice strategies, vocal warm ups, and vocal cool downs, by utilizing a framework like that proposed by Prichard (2012) that incorporates cognitive and live modeling. They may also consider providing follow-along resources to make it as easy as possible for their singers to incorporate strategies into their individual practice sessions. Finally, implementing a recording policy which encourages or requires members to listen to and evaluate their own recordings may help improve their singers' critical listening skills and help them become more strategic when identifying areas for growth and setting goals for their practice.

References

- Amir, O., Amir, N. and Michaeli, O. (2005) 'Evaluating the Influence of Warmup on Singing Voice Quality Using Acoustic Measures', *Journal of Voice*, 19(2), pp. 252–260. Available at: <https://doi.org/10.1016/j.jvoice.2004.02.008>.
- Araújo, M.V. (2016) 'Measuring self-regulated practice behaviours in highly skilled musicians', *Psychology of Music*, 44(2), pp. 278–292. Available at: <https://doi.org/10.1177/0305735614567554>.
- Barbershop Harmony Society. (2020) *What is barbershop music?* [online]. Available at: <https://www.barbershop.org/music/about-our-music> [accessed 18 January 2025].
- Barry, N. H. (1990). 'The effects of different practice techniques upon technical accuracy and musicality in student instrumental performance.' *Research Perspectives in Music Education*, 1, 4-8.
- Byo, J.L. and Cassidy, J.W. (2008) 'An Exploratory Study of Time Use in the Practice of Music Majors: Self-Report and Observation Analysis', *Update : Applications of Research in Music Education*, 27(1), pp. 33–40. Available at: <https://doi.org/10.1177/8755123308322272>.
- Castillo-Allendes, A., Cantor-Cutiva, L.C. and Hunter, E.J. (2024) 'Acoustic Effects of Vocal Warm-Up: A 7-Week Longitudinal Case Study', *Journal of Voice*, 38(2), pp. 458–465. Available at: <https://doi.org/10.1016/j.jvoice.2021.09.030>.
- Clarke, V. and Braun, V. (2017) 'Thematic analysis', *Journal of Positive Psychology*, 12(3), pp. 297–298. Available at: <https://doi.org/10.1080/17439760.2016.1262613>.
- Donahue, E.N. *et al.* (2014) 'Reported Vocal Habits of First-Year Undergraduate Musical Theater Majors in a Preprofessional Training Program: A 10-Year Retrospective Study', *Journal of Voice*, 28(3), pp. 316–323. Available at: <https://doi.org/10.1016/j.jvoice.2013.11.011>.
- Duke, R.A., Simmons, A.L. and Cash, C.D. (2009) 'It's Not How Much; It's How: Characteristics of Practice Behavior and Retention of Performance Skills', *Journal of Research in Music Education*, 56(4), pp. 310–321. Available at: <https://doi.org/10.1177/0022429408328851>.
- Ericsson, K.A., Krampe, R.T. and Tesch-Römer, C. (1993) 'The Role of Deliberate Practice in the Acquisition of Expert Performance', *Psychological Review*, 100(3), pp. 363–406. Available at: <https://doi.org/10.1037/0033-295X.100.3.363>.

Fujiki, R.B., Huber, J.E. and Sivasankar, M.P. (2021) 'Mitigating the Effects of Acute Vocal Exertion in Individuals With Vocal Fatigue', *The Laryngoscope*, 131(12), pp. 2732–2739. Available at: <https://doi.org/10.1002/lary.29627>.

Hallam, S. (1995) 'Professional Musicians' Orientations to Practice: Implications for Teaching', *British Journal of Music Education*, 12(1), pp. 3–19. doi:10.1017/S0265051700002357.

Hallam, S. (2001) 'The Development of Expertise in Young Musicians: Strategy Use, Knowledge Acquisition and Individual Diversity', *Music Education Research*, 3(1), pp. 7–23. Available at: <https://doi.org/10.1080/14613800020029914>.

Hallam, S. et al. (2020) 'Are there differences in practice depending on the instrument played?', *Psychology of Music*, 48(6), pp. 745–765. Available at: <https://doi.org/10.1177/0305735618816370>.

Gish, A. et al. (2012) 'Vocal Warm-Up Practices and Perceptions in Vocalists: A Pilot Survey', *Journal of Voice*, 26(1), pp. e1–e10. Available at: <https://doi.org/10.1016/j.jvoice.2010.10.005>.

How, E.R., Tan, L. and Miksza, P. (2022) 'A PRISMA review of research on music practice', *Musicae Scientiae*, 26(3), pp. 675–697. Available at: <https://doi.org/10.1177/10298649211005531>.

Miksza, P. (2006) 'Relationships among Impulsiveness, Locus of Control, Sex, and Music Practice', *Journal of Research in Music Education*, 54(4), pp. 308–. Available at: <https://doi.org/10.2307/4139753>.

Miksza, P. (2007) 'Effective Practice: An Investigation of Observed Practice Behaviors, Self-Reported Practice Habits, and the Performance Achievement of High School Wind Players', *Journal of Research in Music Education*, 55(4), pp. 359–375. Available at: <https://doi.org/10.1177/0022429408317513>.

Miksza, P. (2011) 'Relationships among achievement goal motivation, impulsivity, and the music practice of collegiate brass and woodwind players', *Psychology of Music*, 39(1), pp. 50–67. Available at: <https://doi.org/10.1177/0305735610361996>.

Nielsen, S.G. (2004) 'Strategies and self-efficacy beliefs in instrumental and vocal individual practice: a study of students in higher music education', *Psychology of Music*, 32(4), pp. 418–431. Available at: <https://doi.org/10.1177/0305735604046099>.

Pike, P.D. (2017) 'Self-regulation of teenaged pianists during at-home practice', *Psychology of Music*, 45(5), pp. 739–751. Available at: <https://doi.org/10.1177/0305735617690245>.

Prichard, S. (2012) 'Practice Makes Perfect? Effective Practice Instruction in Large Ensembles', *Music Educators Journal*, 99(2), pp. 57–62. Available at: <https://doi.org/10.1177/0027432112458458>.

Prichard, S. (2021) 'The Impact of Music Practice Instruction on Middle School Band Students' Independent Practice Behaviors', *Journal of Research in Music Education*, 68(4), pp. 419–435. Available at: <https://doi.org/10.1177/0022429420947132>.

Ragan, K. (2016) 'The Impact of Vocal Cool-down Exercises: A Subjective Study of Singers' and Listeners' Perceptions', *Journal of Voice*, 30(6), p. 764.e1-764.e9. Available at: <https://doi.org/10.1016/j.jvoice.2015.10.009>.

Reckers, H., Donahue, E. and LeBorgne, W. (2021) 'Comparison of Reported Vocal Habits of First-Year Undergraduate and Graduate Vocal Performance Majors', *Journal of Voice*, 35(6), pp. 852–858. Available at: <https://doi.org/10.1016/j.jvoice.2020.04.001>.

Savareh, S. *et al.* (2023) 'Immediate Effects of Semi-occluded Vocal Tract Exercises as a Vocal Warm-Up in Singers', *Journal of Voice*, 37(6), pp. 875–880. Available at: <https://doi.org/10.1016/j.jvoice.2021.05.014>.

Society Contest and Judging Committee, Barbershop Harmony Society. (2023) *Contest and Judging Handbook* [online]. Available at: https://files.barbershop.org/PDFs/Contests-Judging/CJ_Handbook.ver_15.4.pdf [accessed 18 January 2025].

Sloboda, J.A. *et al.* (1996) 'The role of practice in the development of performing musicians', *British Journal of Psychology*, 87(2), pp. 287–309. Available at: <https://doi.org/10.1111/j.2044-8295.1996.tb02591.x>.

Sullivan, G.M. and Artino, A.R. (2013) 'Analyzing and interpreting data from likert-type scales', *Journal of Graduate Medical Education*, 5(4), pp. 541–542. doi:10.4300/jgme-5-4-18.

Summitt, N.L. and Weidner, B.N. (2022) 'Characteristics of expert vocalists' practice', *International Journal of Music Education*, 40(3), pp. 352–363. Available at: <https://doi.org/10.1177/02557614211063996>.

Weidner, B.N. (2021) 'The transfer of group practice strategy instruction to beginning instrumentalists' individual practice', *Psychology of Music*, 49(4), pp. 958–971. Available at: <https://doi.org/10.1177/0305735620911713>.

Appendices

Appendix 1 - Survey Questionnaire (Including Consent Form Questions)

Survey Exploring Individual Vocal Practice Habits of Barbershop Chorus Singers

As part of the MA Voice Pedagogy coursework, Josh Gonsware is investigating the individual practice habits of barbershop chorus singers through the University of Wales Trinity St. David (UWTSd) and the Voice Study Centre (VSC), under the guidance of David Cane. Your participation will help to reveal strengths and areas of opportunity for growth in the effectiveness and efficiency of barbershop chorus singers' individual vocal practice and will allow barbershop chorus leaders to develop strategies to offer singers additional education and resources to address these opportunities for growth.

This survey will take approximately 10 minutes to complete and will accept submissions through November 30, 2024. Participating in this study is voluntary and you are free to change your mind and stop at any point. However, in order for your responses to be included in the results, you must complete the entire survey and select 'Submit' at the end. Please only complete the survey once.

The researcher attained ethical approval from UWTSd and is committed to following ethical guidelines, minimizing risk, and ensuring participant confidentiality. There is a small risk that you may find some of the questions sensitive and they may cause emotional discomfort. All data will be kept in password-protected cloud storage only accessible to the researcher. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in a password-protected folder. All files will be deleted upon the researcher's completion of the module.

If you have any questions about the research, you may contact Josh Gonsware via email at 2319772@student.uwtsd.ac.uk. Thank you very much for your input and cooperation!

By continuing with this survey, you hereby acknowledge the following:

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time.
- I understand that I can refuse to answer questions without any consequence other than my answers will no longer contribute to the results.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation in this phase of the study involves completing a survey, featuring both multiple-choice and open-ended questions.
- I understand that I will not benefit directly from participating in this study.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this study my identity will remain anonymous.
- I understand that under freedom of information legislation, I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact the researcher to seek further clarification and information.

* Indicates required question

1. In order to continue, please confirm that you have read and understand all information provided above and that you consent to participate in this research study.*

Mark only one oval.

☐ I have read and understand all information provided above and I consent to participate in this research study.

2. In order to continue, please confirm that you are a member of the target population for this study.*

Mark only one oval.

☐ I am at least 18 years old and am currently an active singing member of one or more barbershop choruses.

Barbershop Participation

Please answer the following questions regarding your participation in barbershop and other styles/genres of singing.

3. Of which of the following North American barbershop organizations are you a member?*

Please select all that apply.

Check all that apply.

- ☐ Barbershop Harmony Society (BHS)
- ☐ Harmonies Incorporated (HI)
- ☐ Mixed Barbershop Harmony Association (MBHA)
- ☐ Society for the Preservation and Propagation of Barbershop Quartet Singing in the United States (SPPBSCQSUS)
- ☐ Sweet Adelines International (SA)
- ☐ None

4. Of which of the following non-North American barbershop organizations are you a member?*

Please select all that apply.

Check all that apply.

- ☐ British Association of Barbershop Singers (BABS)
- ☐ Barbershop Harmony Australia (BHA)
- ☐ Barbershop Harmony New Zealand (BHNZ)
- ☐ Barbershop of Iberia Association (BIBA)
- ☐ Barbershop in Germany (BdG)
- ☐ Finnish Association of Barbershop Singers (FABS)
- ☐ Dutch Association of Barbershop Singers (Holland Harmony)
- ☐ Irish Association of Barbershop Singers (IABS)
- ☐ Ladies Association of British Barbershop Singers (LABBS)
- ☐ Society of Nordic Barbershop Singers (SNBS)
- ☐ Southern Part of Africa Tonalist Singers (SPATS)
- ☐ None
- ☐ Other: _____

5. Of how many different barbershop choruses are you currently an active singing member?*

Mark only one oval.

- ☐ 1
- ☐ 2
- ☐ 3 or more

6. For how long have you participated in barbershop choruses?*

Mark only one oval.

- ☐ Less than 1 Year
- ☐ 1-2 Years
- ☐ 2-5 Years
- ☐ 5-10 Years
- ☐ 10-20 Years
- ☐ 20-30 Years
- ☐ Over 30 Years

7. Which barbershop voice part(s) do you sing in your chorus(es)?*

Please select all that apply.

Check all that apply.

- ☐ Tenor
- ☐ Lead
- ☐ Baritone
- ☐ Bass

8. How many years of experience do you have with each of the following? *

Mark only one oval per row.

	No experience	0-1 Year	1-2 Years	2-5 Years	5-10 Years	10-20 Years	20-30 Years	Over 30 Years
Singing in barbershop quartets	☐	☐	☐	☐	☐	☐	☐	☐
Singing in barbershop choruses	☐	☐	☐	☐	☐	☐	☐	☐
Directing barbershop choruses	☐	☐	☐	☐	☐	☐	☐	☐
Coaching barbershop choruses/quartets	☐	☐	☐	☐	☐	☐	☐	☐
Singing in non- barbershop vocal ensembles	☐	☐	☐	☐	☐	☐	☐	☐
Directing non- barbershop vocal ensembles	☐	☐	☐	☐	☐	☐	☐	☐

9. About how often do you compete in barbershop contests at each of these competition levels with a chorus? *

Mark only one oval per row.

	Multiple times per year	Once per year	Once every two years	Once every three years	Less often than every three years	Never
Division	☐	☐	☐	☐	☐	☐
Area, District, Region, International Prereqs, and/or Global Alliance Championships	☐	☐	☐	☐	☐	☐
International	☐	☐	☐	☐	☐	☐

10. About how often do you compete in barbershop contests at each of these competition levels with a quartet? *

Mark only one oval per row.

	Multiple times per year	Once per year	Once every two years	Once every three years	Less often than every three years	Never
Division	☐	☐	☐	☐	☐	☐
Area, District, Region, International Prereqs, and/or Affiliate Championships	☐	☐	☐	☐	☐	☐
International	☐	☐	☐	☐	☐	☐

11. Please note the status of your practice with each of the following non-barbershop singing styles/genres. *

Mark only one oval per row.

	Have never practiced	Currently practice	Previously practiced
Blues	☐	☐	☐
Contemporary A Cappella	☐	☐	☐
Contemporary Choral	☐	☐	☐
Country	☐	☐	☐
Experimental	☐	☐	☐
Folk	☐	☐	☐
Gospel	☐	☐	☐
Jazz	☐	☐	☐
Metal	☐	☐	☐
Pop	☐	☐	☐
Rhythm and Blues (R&B)	☐	☐	☐
Rock	☐	☐	☐
Soul	☐	☐	☐
Western Art/Western Classical	☐	☐	☐

12. How many years of voice lessons have you completed? *

Mark only one oval.

☐ I have never taken voice lessons.

☐ 0-1 year

☐ 1-2 years

☐ 2-4 years

☐ 5-10 years

☐ Over 10 Years

Individual Vocal Practice for Your Barbershop Chorus(es)

Please answer the following questions about your individual vocal practice habits.

For this section of the survey, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing to/rehearsing with other ensembles.

13. How frequently do you practice singing for your barbershop chorus(es) on your own?

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Mark only one oval.

- ☐ Every day
☐ 4-6 times a week
☐ 2-3 times a week
☐ Once a week
☐ Several times a month
☐ Once a month or less frequently

14. Which of the following best describes your typical individual practice on a day that you practice for your barbershop chorus(es)?

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Mark only one oval.

- ☐ Single practice session with a specific, predetermined purpose
☐ Single practice session without a specific, predetermined purpose
☐ Multiple practice sessions over the course of the day, each with a specific, predetermined purpose
☐ Multiple practice sessions over the course of the day, without a predetermined purpose

15. How long is your typical individual practice session?

If you tend to practice in multiple sessions per day, please respond with the cumulative time spent practicing in a typical day that includes individual practice.

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Example: 4:05.92 (4 hours, 5 minutes, 92 seconds)

16. Please indicate your agreement or disagreement with each of the following statements regarding your approach to individual practice.

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Mark only one oval per row.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
My practice regimen is consistent, with each day's practice closely resembling other days.	☐	☐	☐	☐	☐
I vary my approach to practice dependent on upcoming performance needs and expectations.	☐	☐	☐	☐	☐
Each practice session differs due to my needs for technical and musical development.	☐	☐	☐	☐	☐
I follow a routine that varies little from one practice session to the next.	☐	☐	☐	☐	☐
My practice varies dependent on how familiar I am with the repertoire being studied.	☐	☐	☐	☐	☐
Each practice session addresses a different set of needs with little similarity between one session and the next.	☐	☐	☐	☐	☐

18. Which of the following resources do you use regularly as part of your practice? *

If you regularly use other resources that are not included in the list below, please select 'Other' and list them.

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Check all that apply:

- ☐ Music dictionary
- ☐ Recordings of your chorus' previous rehearsals and/or performances
- ☐ Recordings of other ensembles previous rehearsals and/or performances
- ☐ Recordings of your own previous individual practice sessions
- ☐ Learning tracks
- ☐ Metronome
- ☐ Microphone/Camera
- ☐ Pitch Pipe
- ☐ Piano/Keyboard
- ☐ Yoga balls, straps, etc.
- ☐ Phone Apps (e.g. TE Time)
- ☐ Other: _____

19. Which type of learning tracks do you regularly utilize? *

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Check all that apply:

- ☐ Full Mix (i.e. all four parts balanced across both audio channels)
- ☐ Part dominant (i.e. all four parts present across both audio channels, with your voice part dominant relative to other three voice parts)
- ☐ Part-ell/Part-right (i.e. your voice part playing exclusively out of one channel, with the other three voice parts playing exclusively out of the other)
- ☐ Part-missing (i.e. the other three voice parts are present but your voice part is omitted)
- ☐ None

20. What are your biggest motivations for practicing singing for your barbershop chorus(es) on your own? *

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

21. Do your chorus(es) use any methods to verify that members are meeting the musical expectations of the ensemble (e.g. required recording submissions, music learning aid)? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not Sure

22. If you answered 'Yes' above, please describe the methods your chorus(es) use to verify that members are meeting the musical expectations of the ensemble.

23. Do you feel that you spend an adequate amount of time practicing singing to meet your chorus(es)' musical expectations? *

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not Sure

24. If you answered 'No' or 'Not Sure' above, what are the biggest obstacles preventing you from spending an adequate amount of time practicing singing to meet the musical expectations of your chorus(es)?

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

25. Do you feel that you spend an adequate amount of time practicing singing to meet your personal goals? *

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not Sure

26. If you answered 'No' or 'Not Sure' above, what are the biggest obstacles preventing you from spending an adequate amount of time practicing singing to meet your personal goals?

For this question, please think only about your individual practice for your barbershop chorus(es) and not time spent rehearsing with your chorus(es) or practicing for/rehearsing with other ensembles.

27. Do your chorus leaders provide education and resources related to how to learn music effectively and efficiently? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not Sure

28. Do your chorus leaders provide education and resources related to how to practice singing effectively and efficiently? *

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Not Sure

29. Please share anything else you would like to share about your individual vocal practice habits for your barbershop chorus.

Demographic Questions

Please answer the following demographic questions:

30. Which of the following best describes your gender identity? *

Mark only one oval.

- ☐ Man
☐ Woman
☐ Non-binary
☐ Gender fluid
☐ Agender
☐ Prefer not to answer
☐ Other: _____

31. What is your age? *

Mark only one oval.

- ☐ Under 20 years old
☐ 20-29 years old
☐ 30-39 years old
☐ 40-49 years old
☐ 50-59 years old
☐ 60-69 years old
☐ 70-79 years old
☐ 80+ years old
☐ Prefer not to answer

32. Which of the following best describes your current employment status? *

Mark only one oval.

- ☐ Employed Part-Time
☐ Employed Full-Time
☐ Full-Time Homemaker
☐ Retired
☐ Self-Employed
☐ Unemployed
☐ Prefer not to answer

33. What is your current student status? *

Mark only one oval.

- ☐ Not a student
☐ Part-time student
☐ Full-time student
☐ Prefer not to answer

34. Are you currently a professional musician or are you training to be a professional musician? *

Mark only one oval.

- ☐ Yes
☐ No
☐ Not Sure

35. Which of the following types of music training have you completed? *

Please select all that apply.

Check all that apply:

- ☐ Independent music lessons
☐ Advanced (High/Lower Secondary Education Events (e.g. Harmony College band)
☐ International Level Barbershop Education Events (e.g. BHS, Harmony University, SAI International Education Symposium)
☐ High School coursework in Music (or related subject)
☐ Undergraduate coursework in Music (or related subject)
☐ Undergraduate Minor/Certificate in Music (or related subject)
☐ Undergraduate Degree in Music (or related subject)
☐ Graduate Coursework in Music (or related subject)
☐ Graduate Degree in Music (or related subject)
☐ None of these

36. What is the highest level of general education that you have completed? *

Mark only one oval.

- ☐ Less Than High School Diploma/General Education Development (GED)
☐ High School Diploma/General Education Development (GED)
☐ Undergraduate Degree
☐ Graduate Degree

Willingness to Participate in a Follow-Up Interview

The researcher would like to conduct a small number of interviews with respondents to discuss their individual vocal practice in greater depth.

Please note below whether you would be willing to participate in such an interview. If so, you will be asked to provide your name and contact information so that the researcher can contact you to schedule an interview, if you are selected.

37. If selected, are you willing to participate in a follow-up interview to discuss your individual vocal practice further? *

Mark only one oval.

- ☐ Yes
☐ No

Name and Contact Information

Please complete the questions below so that the researcher can contact you to schedule an interview if you are selected.

This information is collected only for the purposes of contacting interview participants to schedule an interview. Please recall that this information will be treated confidentially and that your identity will remain anonymous in any report of the results of this study.

These data will be kept in password-protected cloud storage only accessible to the researcher. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in a password-protected folder. All files will be deleted upon Josh Songware's completion of this module.

38. What is your full name? *

39. What is your email address? *

40. Where do you live (city, state/province, country)? *

Appendix 2 - Interview Questionnaire

For this session, when I refer to individual practice sessions, I am referring only to time you spend individually practicing for your barbershop chorus(es). Please ignore time spent rehearsing with your chorus(es), or time spent practicing for or rehearsing with other ensembles like a quartet.

Warm Ups

1. Can you please describe how you typically vocally warm up for an individual practice session?
2. What kinds of exercises do you utilize in your individual vocal warm ups? [Ask follow-up questions based on their response. Some potential things to prompt respondents with below.]
 - a. Body stretches?
 - b. Tongue stretches/swirls?
 - c. Jaw/laryngeal massage?
 - d. SOVTEs?
 - e. Scale exercises?
 - f. Vocal agility exercises?
3. How much time do you typically spend warming up?
4. What kind of information have your director(s)/ensemble leaders given you on best practices on vocal warmups?
5. Do you vary your vocal warm up routine depending on the repertoire you are practicing, your goals for the session, how your voice feels, etc.? Or are your warm ups very similar for each section?

Practice

6. Can you please describe your typical individual practice session?
 - a. How long?
 - b. Learning tracks?
 - c. Sheet music?
 - i. Viewing?
 - ii. Marking?
 - d. Metronome?
 - e. Tuning app?
 - f. Recording?
 - g. Strategies?
 - i. Whole part whole?
 - ii. Repeat small sections?
 - iii. Remove words?
 - iv. Slow down tempo?
 - v. Exercises like SOVTEs?
7. How much of your practice involves singing along with a learning track?
8. What kind of information have your director(s)/ensemble leaders given you on how to learn music?
9. What kind of information have your director(s)/ensemble leaders given you on how to practice singing?

Cool Downs

10. Can you please describe how you typically vocally cool down from your individual vocal practice sessions?

11. What kinds of vocal exercises do you utilize in your individual vocal cool downs? [Ask follow-up questions based on their response. Some potential things to prompt respondents with below.]
- Body stretches?
 - Tongue stretches/swirls?
 - Jaw/laryngeal massage?
 - SOVTEs?
 - Scale exercises?
 - Vocal agility exercises?
12. How much time do you typically spend cooling down?
13. What kind of information have your director(s)/ensemble leaders given you on how to vocally cool down?
14. Do you vary your vocal cool down routine depending on the repertoire you are practicing, your goals for the session, how your voice feels, etc.? Or are your warm ups very similar for each section?

Chorus Policies

15. How effective do you feel your chorus policies for ensuring members are meeting ensemble expectations are?
- Do you think they are necessary?
 - Do you have any ideas for how to more effectively ensure this?

Miscellaneous

16. What do you feel you do well in terms of your individual vocal practice?
17. What do you feel are your biggest areas of opportunity in terms of your individual vocal practice?
18. Do you have individual goals that you are working toward as a singer? If so, please describe them and your approach to working toward them.
19. Do you feel that participating in your chorus(es) is helping you improve as a singer?

Appendix 3 - Interview Informed Consent Form

Interviews Exploring Individual Practice Habits of Barbershop Chorus Singers - Informed Consent Form

As part of his MA Voice Pedagogy coursework, Josh Gongaware is investigating the individual practice habits of barbershop chorus singers through the University of Wales Trinity St. David (UWTSD) and the Voice Study Centre (VSC), under the guidance of David Cane. Your participation will help to reveal strengths and areas of opportunity for growth in the effectiveness and efficiency of barbershop chorus singers' individual vocal practice and will allow barbershop chorus leaders to develop strategies to offer singers additional education and resources to address these opportunities for growth.

You were selected to complete a follow-up interview based on your responses to a survey exploring individual practice habits of barbershop chorus singers. This interview will take approximately 30 minutes, but may be slightly shorter or longer depending on how the conversation flows. Participating in this phase of the study is voluntary and you are free to change your mind and stop at any point.

The researcher attained ethical approval from UWTSD and is committed to following ethical guidelines, minimizing risk, and ensuring participant confidentiality. There is a small risk that you may find some of the questions sensitive and they may cause emotional discomfort. All interviews will be conducted via Zoom video calls, and the calls will be recorded. All interview recordings and transcripts will be kept in password-protected cloud storage only accessible to the researcher. All files will be deleted upon the researcher's completion of the module.

If you have any questions about the research, you may contact Josh Gongaware via email at 2319772@student.uwtsd.ac.uk. Thank you very much for your input and cooperation!

By continuing with this survey, you hereby acknowledge the following:

- I voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time.
- I understand that I can refuse to answer questions without any consequence other than my answers will no longer contribute to the results.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation in this phase of the study involves completing an interview that will be conducted via a Zoom video call, which will be recorded.
- I understand that I will not benefit directly from participating in this study.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this study my identity will remain anonymous.
- I understand that under freedom of information legislation, I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am entitled to request a copy of the study and any reports or publications arising from my participation.
- I understand that I am free to contact the researcher to seek further clarification and information.

* Indicates required question

1. What is your full name? *

2. What is your email address? *

3. In order to continue, please confirm that you have read and understand all information provided above and that you consent to participate * in this research study.

Mark only one oval.

☐ I have read and understand all information provided above and I consent to participate in this research study.

4. In order to continue, please confirm that you are a member of the target population for this study. *

Mark only one oval.

☐ I am at least 18 years old and am currently an active singing member of one or more barbershop choruses.

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Google Forms

Appendix 4 - Approved University of Wales Trinity Saint David Ethics Form



PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS

This form is to be completed by the student within **SIX** months for full-time students and **TWELVE** months for part time students, after the commencement of the research degree or following progression to Part Two of your course.

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

This document is also available in Welsh.

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Joshua J Gongaware			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☒	Postgraduate Research Student
3	Institute/Academic Discipline/Centre:	WAPPAR Voice Study Centre			
4	Campus:	Carmarthen			
5	E-mail address:	2319772@student.uwtsd.ac.uk			
6	Contact Telephone Number:	+1 (724) 875-1825			

For students:		
7	Student Number:	2319772
8	Programme of Study:	MA Professional Practice (Voice Pedagogy)
9	Director of Studies/Supervisor:	Louise Emanuel/Julie Crossman/Debbie Winter

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
					Date
2	If Yes, please indicate source of approval (and date where known): <i>Approval in principle must be obtained from the relevant source prior to seeking ethical approval</i>	Research Degrees Committee	☐		
Institute Research Committee		☐			
Other (write in) WAPPAR Ethics Board Representative		☒			

SECTION C: Internal and External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.	
1	UWTSD Research Ethics & Integrity Code of Practice ☒
2	UWTSD Research Data Management Policy ☒
3	United States Department of Health and Human Services, Ethical Principles and Guidelines for the Protection of Human Subjects of Research https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf ☒

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD Athrofa	If YES then the permission question YES ☐ NO ☐

	Professional Learning Partnership (APLP)?	below does not need to be answered.				
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	Individual Vocal Practice Habits of Barbershop Chorus Singers: A Mixed-Methods Investigation		
2	Proposed start date:	26 September, 2024	Proposed end date:	13 January, 2025
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how Existing Research has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>			
3	Purpose of Research Activity Most barbershoppers are avocational singers, and many lack vocal training outside of their barbershop experience. Therefore, barbershop choral leaders are influential music educators whose advice shapes their singers' vocal technique and individual vocal practice habits. However, since individual vocal practice is typically only visible to the practicing individual, choral leaders have limited information on their singers' vocal practice outside of chorus rehearsal. This research seeks to adapt the work of Summit and Weidner (2022) to investigate the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal, identify strengths and areas of opportunity, and inform barbershop choral leaders on how to better help their singers develop effective and efficient individual vocal practice habits.			
4	Research Question What are the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal in terms of time, structure, objectives, strategies, and resource usage?			

5	Aims of Research Activity - Understand the individual vocal practice habits of barbershop chorus singers outside of chorus rehearsal in terms of the following dimensions: - Time - Structure - Objectives - Strategies - Resource Usage - Identify strengths and areas of opportunity for growth in the effectiveness and efficiency of barbershop chorus singers' individual vocal practice. - Develop strategies for barbershop chorus leaders to offer singers additional education and/or resources to address their individual vocal practice's areas of opportunity for growth.
6	Objectives of Research Activity - Review literature on musician's practice habits, emphasizing studies on vocalists, choral singers, barbershop singers, and avocational musicians. - Review literature on survey and interview best practices to inform subsequent data collection steps. - Develop and administer a survey to collect data on the individual vocal practice habits of barbershop chorus singers. - Conduct follow-up interviews to further interrogate select responses that warrant additional explanation. - Analyze survey and interview data and triangulate results. - Write a final report outlining my literature review, methodology, results, conclusions, and recommendations for future research.
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	This mixed methods study will feature three primary components: Literature review - I will conduct a comprehensive review of the literature related to musicians' practice habits, with an emphasis on studies of vocalists, choral singers, barbershop singers, and/or avocational musicians as those are most related to my practice. Additional literature related to general practice or skill-building habits, pedagogy, education and/or neuroscience may also be discussed as it relates to identifying effective and efficient learning strategies. I will also review the literature related to survey and interview best practices to inform the subsequent data collection steps to ensure that they are as rigorous as possible. Survey - I will develop a survey and invite potential participants to complete it electronically. The survey will include qualitative questions which ask respondents to describe some aspect of their individual vocal practice, including some open-ended questions. It will also include quantitative questions, such as asking respondents to rate the frequency with which they utilize various strategies and resources. Interviews - The survey will conclude by asking respondents if they are willing to participate in a follow-up interview, and if so, provide their name and contact information. I will select a subset of respondents who indicate willingness to participate in an interview and whose responses warrant further interrogation to invite and invite them via email to participate in an interview over a Zoom video call. The interviews will be semi-structured, allowing for some flexibility to discuss the individuals' experience organically, while still allowing for sound comparison between interview responses and generation of themes.

	Location of research activity Identify all locations where research activity will take place.
8	All research will be conducted virtually, with the survey being administered via either Google Forms or Microsoft Forms (to be determined) and the interviews and being conducted on Zoom video calls.
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.
9	I live in the United States, which is where I will be based while conducting my research. The parts of the research involving participants will be conducted entirely virtually via an online survey and video calls. The organizations whose singers comprise my target population live not just in the United States, but in various countries around the world, including the United Kingdom. In addition to the ethical requirements imposed by UWTSD, I will be following the guidelines linked below from the United States Department of Health and Human Services for the portions of my research involving human subjects: Ethical Principles and Guidelines for the Protection of Human Subjects of Research https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf

10	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☒
		YES	☐
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales. N/A <i>(this box should expand as you type)</i>		

	Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?	YES	NO
12	A prosperous Wales	☐	☒
13	A resilient Wales	☐	☒
14	A healthier Wales	☐	☒
15	A more equal Wales	☐	☒
16	A Wales of cohesive communities	☐	☒
17	A Wales of vibrant culture and thriving Welsh language	☐	☒
18	A globally responsible Wales	☐	☒
19	If YES to any of the above, please give details:		
	N/A		

SECTION F: Scope of Research Activity

	Will the research activity include:	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☐	☒
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☒	☐
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☐	☒
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.		
	Details of any other primary data collection method:	☐	☒
	N/A		

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

Who are the intended participants:		YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☒
5	Prisoners?	☐	☒
6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☒
	N/A		

Participant numbers and source	
Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
10	How many participants are expected? Approximately 50-100 survey participants and 3-5 interview participants.
11	Who will the participants be? Adult singers in a chorus from BHS, GA, SAI, and/or HI.
12	How will you identify the participants? I will send an email to the contact email address of various BHS, GA, SAI, and HI choruses and ask them to share the survey link with their singers for their participation. I will also post the survey link in barbershop-related social media groups to solicit additional responses. After informed consent to proceed is obtained, participants will be asked screening questions to identify respondents who are in the target population. Respondents who fail to meet the age and/or membership criteria will not be asked any further questions, and respondents who meet both criteria will continue on to the survey. At the end of the survey, participants will be asked if they are willing to participate in a follow-up interview, if selected. If they respond that they are willing to participate in a follow-up interview, they will then be asked to provide their name and email address so that they can be contacted about scheduling an interview.

	Once survey data collection is complete, I will review the survey responses for those who provided their name and contact information for the survey and select a sample of those whose responses warrant further interrogation and reach out to them to schedule a Zoom interview.
--	---

	Information for participants:	YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
	N/A			

	Information for participants:	YES	NO	N/A
24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☒	☐	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
	Interviews occurring on Zoom will be recorded through Zoom's internal recording functionality. Participants will be made aware that their interviews will be recorded prior to the start of the recording			

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.						
1	Full risk assessment completed and appended?	<table border="1"> <tr> <td>Yes</td> <td>☐</td> </tr> <tr> <td>No</td> <td>☒</td> </tr> </table>	Yes	☐	No	☒
Yes	☐					
No	☒					
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information					
	Risk to participants: Participants will be asked for demographic information such as age and gender. Additionally, participants who are willing to participate in a follow-up interview will be asked to provide their name and email address. Participants may also voluntarily reference sensitive information in their open-ended survey and/or interview responses. As always, there is risk of a breach or mishandling of the research data, resulting in these data being accessed by unauthorized parties. There is a small risk that participation in the survey or interview could trigger emotional distress, for instance if a singer harbors guilt or regret about their individual vocal practice habits.	How you will mitigate the risk to participants: I will only store survey and interview data on my password-protected personal computer or in my password-protected Google or Office365 cloud storage account, all of which are accessible to only me and will not be shared with anyone else. I will only ask for information from participants that is necessary to obtain informed consent or is relevant to address my research questions, to keep sensitive data to a minimum. I will keep the survey data anonymous and confidential and will not include any information that is likely to result in the identification of a respondent in the final report. All data transfers will be encrypted or password-protected. Video recordings of interviews will be transcribed and would be shown to participants to check accuracy of reporting. All interview participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in my password-protected Google or Office365 cloud storage account. I will make the questions as neutrally-worded as possible. I will also take care in the interview process to deliver the questions in a neutral manner to minimize the chance of triggering any negative emotions in my participants.				
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities					
	N/A					

4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
	Risk to the investigator: As always, there is risk of accusation of harm/impropriety on my part, especially if something does not go according to plan throughout the research process. There is risk of participants withdrawing from the study at any time, resulting in loss of usable data. There is a small risk of emotional distress on my part, for instance if a respondent is rude to me or insults me or my research in some way in their responses.	How you will mitigate the risk to the investigator: I will aim to minimize the risk of being accused of harm or impropriety by following all relevant ethical guidelines and requirements, keeping meticulous records of the informed consent process, and communicating clearly and thoroughly with my respondents throughout the research process. I will aim to collect as much data as possible so that if some of the participants choose to withdraw from the study, I will still have sufficient data to draw meaningful conclusions. I will make the questions as neutrally-worded as possible. I will also take care in the interview process to deliver the questions in a neutral manner to minimize the chance of triggering any negative emotions in my participants and hence minimize the chance of them being rude to me or insulting me or my research in their responses.
5	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University: If there is an issue relating to a data breach or mishandling of data, or an accusation of harm or impropriety on the part of the researcher, this could result in reputational damage through adverse publicity or financial loss or other penalties on the part of the University, if it is found to be liable for this malpractice.	How you will mitigate the risk to the University: I will only store survey and interview data on my password-protected personal computer or in my password-protected Google or Office365 cloud storage account, all of which are accessible to only me and will not be shared with anyone else. I will only ask for information from participants that is necessary to obtain informed consent or is relevant to address my research questions, to keep sensitive data to a minimum. I will keep the survey data anonymous and confidential and will not include any information that is likely to result in the identification of a respondent in the final report. All data transfers will be encrypted or password-protected. Video recordings of interviews will be transcribed and would be shown to participants to check accuracy of reporting. All interview participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in my password-protected Google or Office365 cloud storage account. I will aim to minimize the risk of being accused of harm or impropriety by following all relevant ethical guidelines and requirements, keeping

		meticulous records of the informed consent process, and communicating clearly, thoroughly, and respectfully with my respondents throughout the research process.
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: There are no notable risks to the environment, as this research will be conducted entirely virtually.	How you will mitigate the risk to environment: N/A

	Disclosure and Barring Service			
	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?	☐	☒	☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.	N/A		

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	For survey participants, upon completion of the survey, they will be presented with a screen thanking them for their participation and providing my contact information and inviting them to reach out to me if they have any questions about the research in the future. For interview participants, I will send them a follow-up email shortly after completion of the interview thanking them for their participation and providing my contact information and inviting them to reach out to me if they have any questions about the research in the future.
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Before beginning the survey, participants will be presented with a summary of all relevant information about the research project. It will note that by completing the survey they are confirming that they are providing informed consent for participation in this research project. Survey respondents who are selected to complete a follow-up interview will complete and return a separate written consent form prior to the interview, which will cover all relevant details of the project, with an emphasis on how I will maintain anonymity and confidentiality of interview responses.

3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. Survey respondents who do not signal willingness to participate in follow-up interviews will not be asked to provide their name or contact information. The identity of these respondents will not be unknown to me, and hence will be totally anonymous. Survey respondents who signal willingness to participate in interviews - regardless of whether they ultimately do complete a follow-up interview - will be asked to provide their name and contact information. These respondents' identities will be known to me, but their survey responses will remain confidential. In the final report, no survey response will be linked to a respondent's name or other identifiable information. The identity of interview respondents will also be known to me. Like survey respondents whose identities are known to me, their interview responses will remain confidential. In the final report, no interview response will be linked to a respondent's name or other identifiable information. For ease of discussing interview responses in the final report, interview respondents may be assigned and referred to by a participant number or pseudonym. I will also follow strong data protection practices as outlined in Section J to minimize the risk of any of the data - including survey responses containing personal information, interview consent forms, interview recordings, and interview transcripts - being compromised.
---	--

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☒	☐
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	I will collect names and email addresses only from those who signal their willingness to participate in a follow-up interview. This is necessary so that I can contact them to schedule and conduct their interview. I will collect written consent forms from those who are selected to participate in interviews, which will include the participants' names. This is necessary to obtain informed consent for the interview phase of the project. I will record the interviews using Zoom's internal recording functionality so that I can reference the interviews during the analysis phase of the project.		

	Does it involve special category data (as defined by the GDPR)?	YES	NO
3	“Special category data” means sensitive personal data consisting of information as to the data subjects’ – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),	☐	☒
	If YES, provide a description of the special category data and explain why this data needs to be collected:		
4	N/A		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☐	☒
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☒	☐
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☐	☒
10	“Cloud” storage or websites?	☒	☐
11	Other – specify:	☐	☒
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	- I will only store survey and interview data on my password-protected personal computer or in my password-protected Google or Office365 cloud storage account, all of which are accessible to only me and will not be shared with anyone else. - I will only ask for information from participants that is necessary to obtain informed consent or is relevant to address my research questions, to keep sensitive data to a minimum. - I will keep the survey data anonymous and confidential and will not include any information that is likely to result in the identification of a respondent in the final report. - All data transfers will be encrypted or password-protected. - Video recordings of interviews will be transcribed and would be shown to participants to check accuracy of reporting. - All interview participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in my password-protected Google or Office365 cloud storage account. - All data will be deleted upon submission of my final report.		

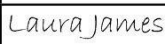
Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☒	☐
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☒	☐
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☒	☐
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒
21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	- I will only store survey and interview data on my password-protected personal computer or in my password-protected Google or Office365 cloud storage account, all of which are accessible to only me and will not be shared with anyone else. - I will only ask for information from participants that is necessary to obtain informed consent or is relevant to address my research questions, to keep sensitive data to a minimum. - I will keep the survey data anonymous and confidential and will not include any information that is likely to result in the identification of a respondent in the final report. - All data transfers will be encrypted or password-protected. - Video recordings of interviews will be transcribed and would be shown to participants to check accuracy of reporting. - All interview participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in my password-protected Google or Office365 cloud storage account. - All data will be deleted upon submission of my final report.		
22	List all who will have access to the data generated by the research activity:		
	Principal researcher only		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Principal researcher only		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	- I will only store survey and interview data on my password-protected personal computer or in my password-protected Google or Office365 cloud storage account, all of which are accessible to only me and will not be shared with anyone else. - I will only ask for information from participants that is necessary to obtain informed consent or is relevant to address my research questions, to keep sensitive data to a minimum. - I will keep the survey data anonymous and confidential and will not include any information that is likely to result in the identification of a respondent in the final report. - All data transfers will be encrypted or password-protected. - Video recordings of interviews will be transcribed and would be shown to participants to check accuracy of reporting. - All interview participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in my password-protected Google or Office365 cloud storage account. - All data will be deleted upon submission of my final report.		

25	Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. <i>(Most relevant to academic staff)</i>		
	No		
26	Confirm that you have read the UWTSD guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:		Date: 19 August 2024

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Laura James	Date: 17.10.24
3	Signature:		

For STAFF Submissions:

4	Academic Director/ Assistant Dean:		Date:
5	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY

Once complete, submit this form via the **MyTSD Doctoral College Portal** at (<https://mytsd.uwtsd.ac.uk>).

RESEARCH STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

Appendix 5 - Self-Permission Letter

Josh Gongaware Music
925 Bridgewater Dr
Pittsburgh, PA 15216

+1 (724) 875-1825
joshgongaware@gmail.com

15 August 2024

RE: Individual Vocal Practice Habits of Barbershop Chorus Singers: A Mixed-Methods Investigation

Dear University of Wales Trinity Saint David,

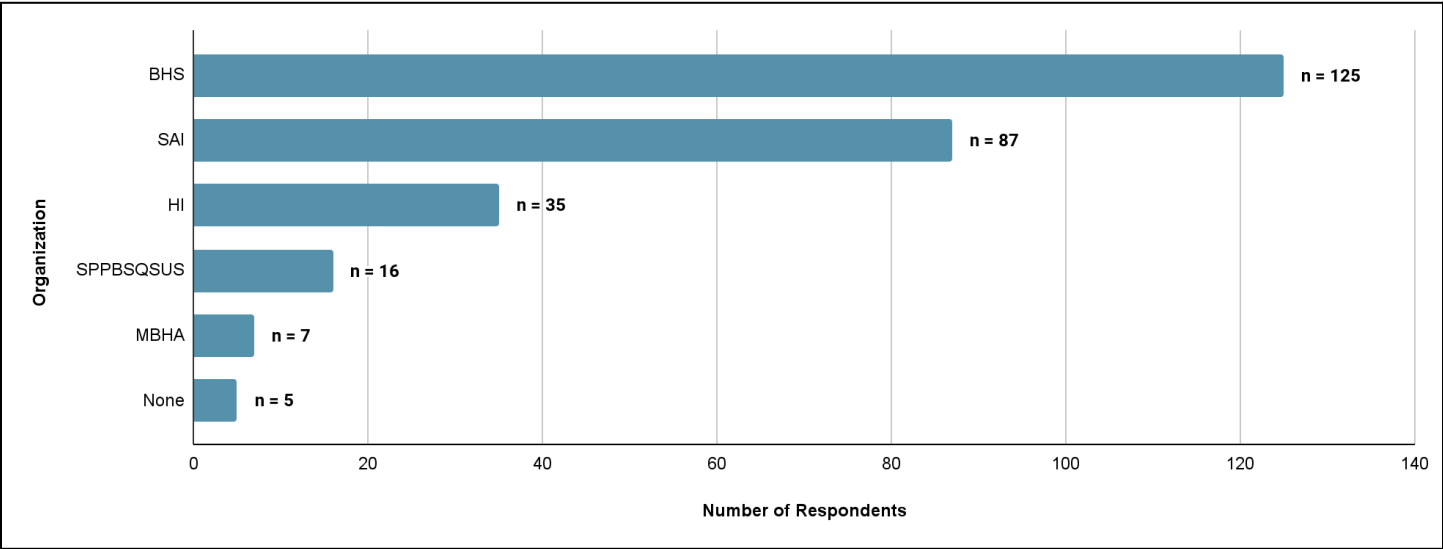
This letter serves to confirm that I approve of the research proposed into individual vocal practice of barbershop chorus singers to be carried out by Joshua Gongaware of Josh Gongaware Music via online surveys and interviews with barbershop chorus singers between September 2024 and January 2025.

Kind Regards,

A handwritten signature in black ink, appearing to read 'Joshua Gongaware', written in a cursive style.

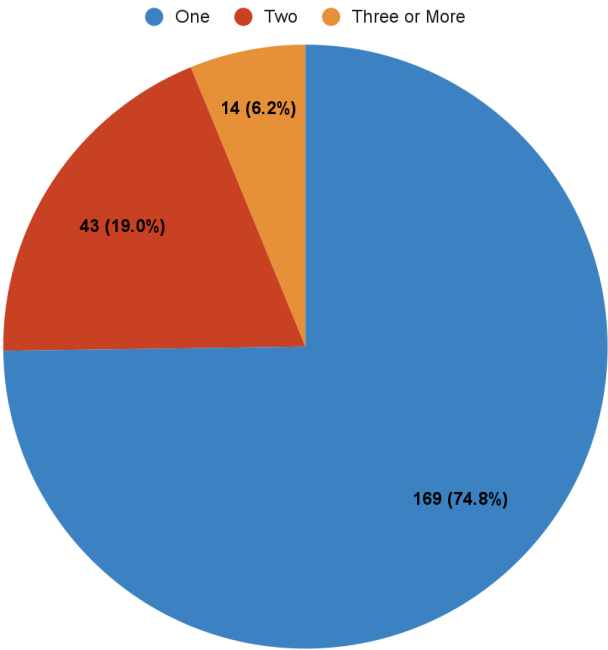
Joshua Gongaware

Appendix 6 - North American Barbershop Organization Membership



Appendix 7 - Barbershop Chorus Membership

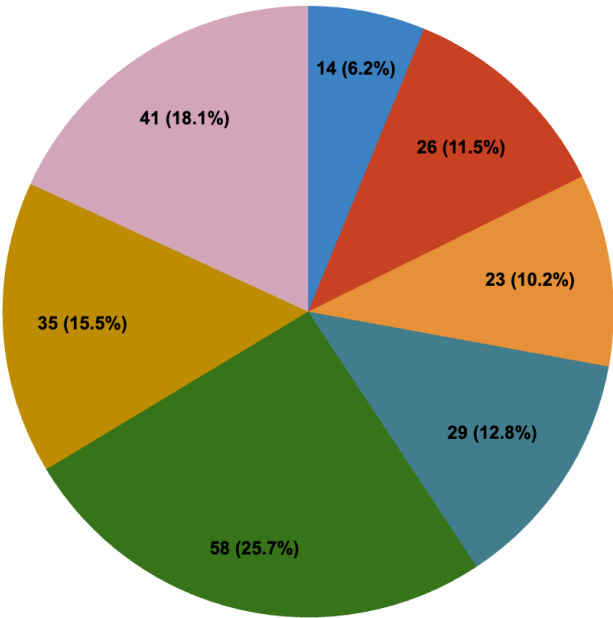
Of how many different barbershop choruses are you currently an active singing member?



Appendix 8 - Barbershop Chorus Years of Experience

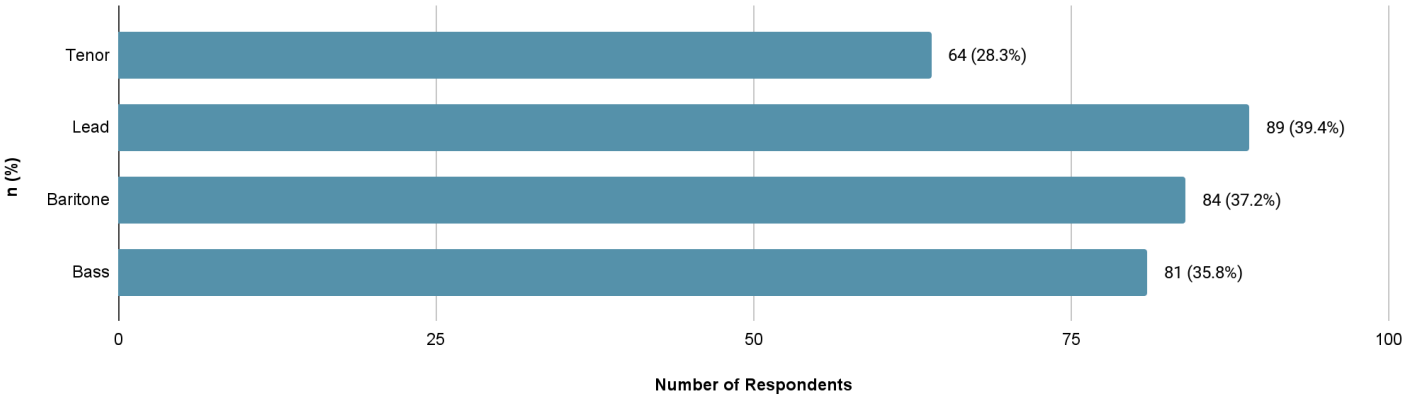
For how long have you participated in barbershop choruses?

Less than 1 Year 1-2 Years 2-5 Years 5-10 Years 10-20 Years 20-30 Years Over 30 Years



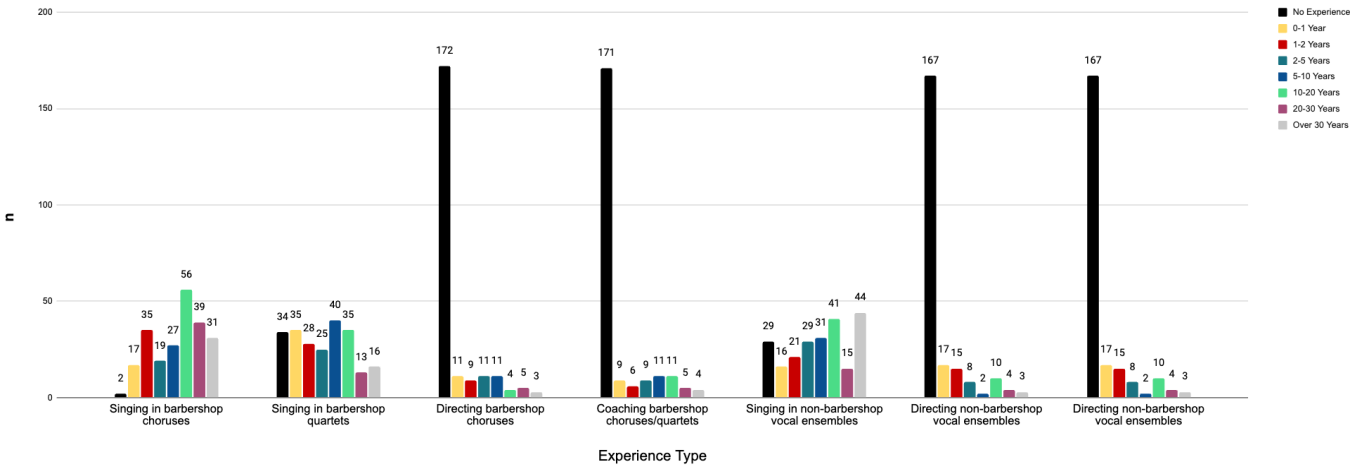
Appendix 9 - Barbershop Voice Parts

Which barbershop voice part(s) do you sing in your chorus(es)?
Please select all that apply.



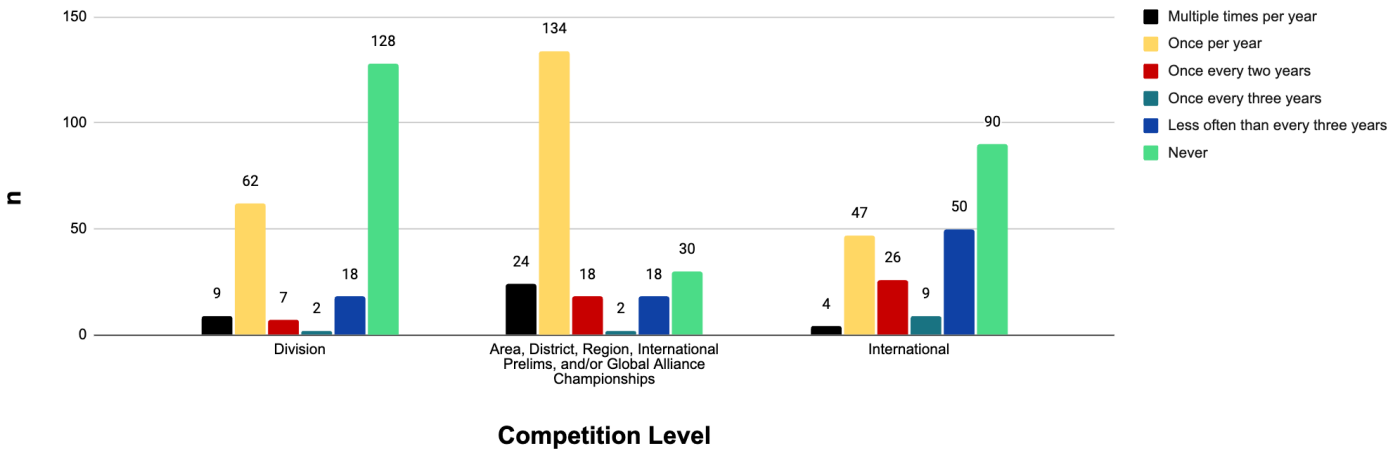
Appendix 10 - Barbershop Voice Parts

How many years of experience do you have with each of the following?



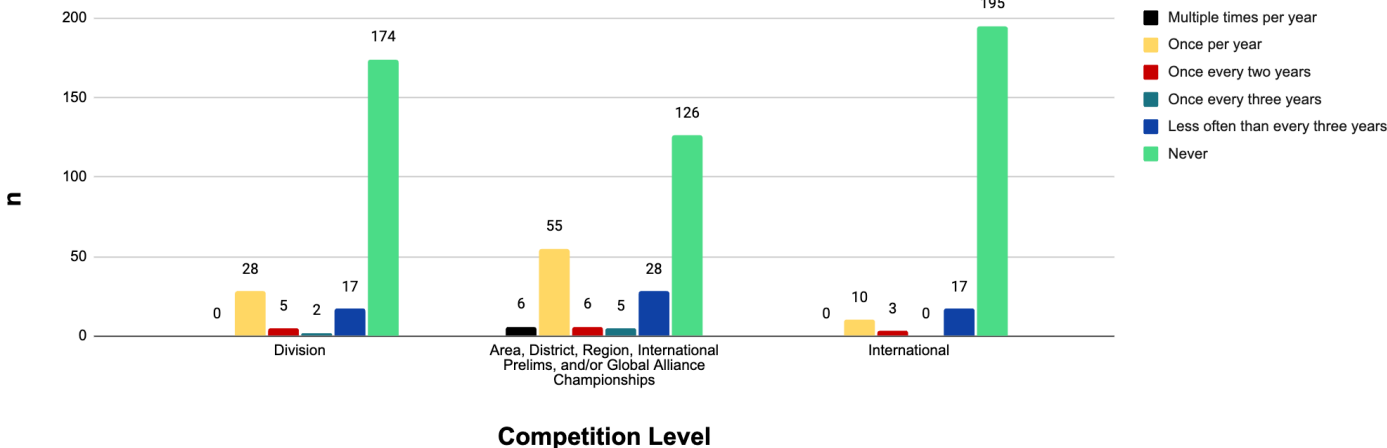
Appendix 11 - Barbershop Chorus Competition Frequency

About how often do you compete in barbershop contests at each of these competition levels with a chorus?



Appendix 12 - Barbershop Chorus Competition Frequency

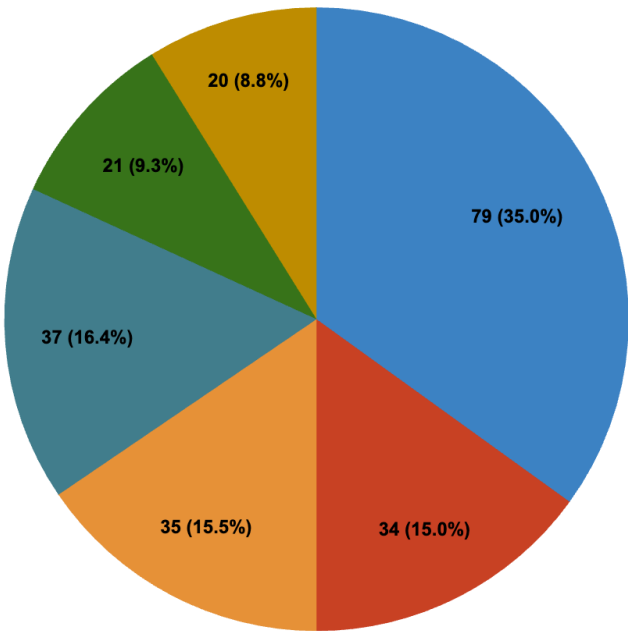
About how often do you compete in barbershop contests at each of these competition levels with a quartet?



Appendix 13 - Voice Lessons Experience

How many years of voice lessons have you completed?

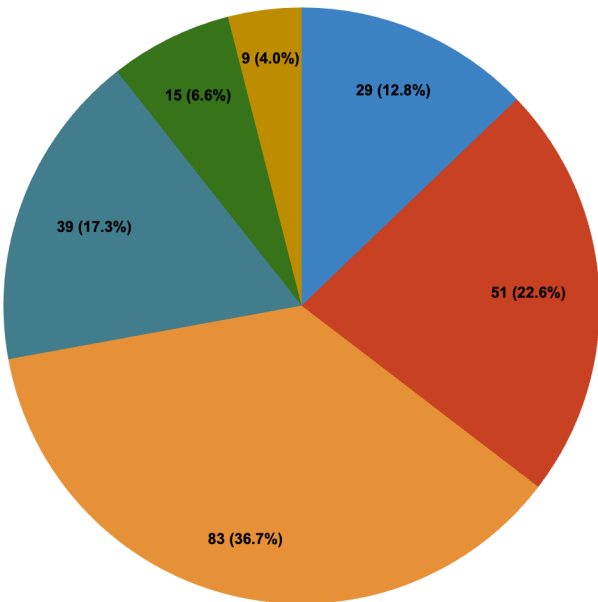
I have never taken voice lessons Less than 1 Year 1-2 Years 2-5 Years 5-10 Years Over 10 Years



Appendix 14 - Individual Practice Frequency

How frequently do you practice singing for your barbershop chorus(es) on your own?

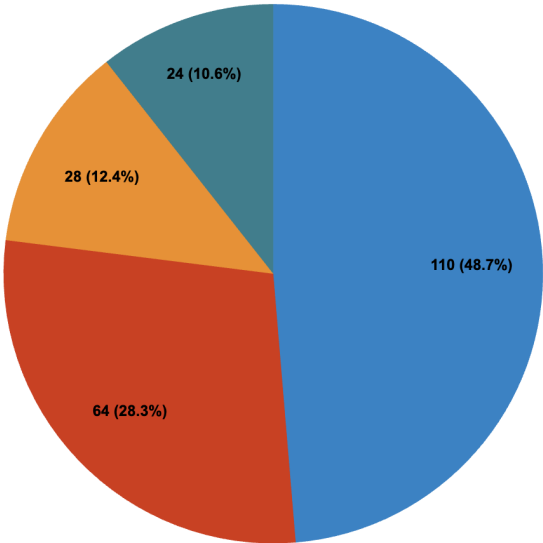
Every day 4-6 times a week 2-3 times a week Once a week Several times a month Once a month or less frequently



Appendix 15 - Individual Practice Structure

Which of the following best describes your typical individual practice on a day that you practice for your barbershop chorus(es)?

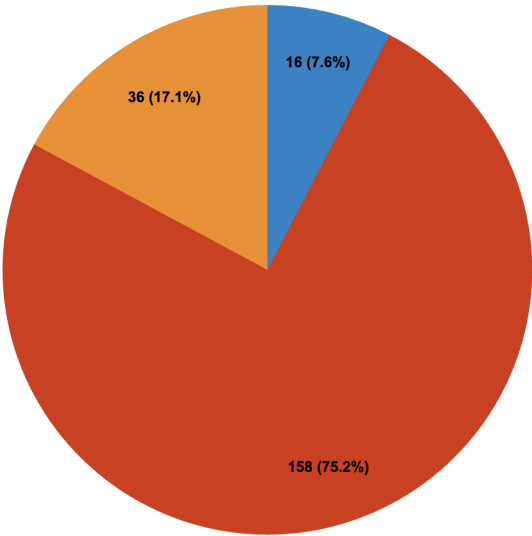
- Single practice session with a specific, predetermined purpose
- Single practice session without a specific, predetermined purpose
- Multiple practice sessions over the course of the day, each with a specific, predetermined purpose
- Multiple practice sessions over the course of the day, without a predetermined purpose



Appendix 16 - Individual Practice Duration

How long is your typical individual practice session?

Less than 30 Minutes 30-60 Minutes Over 60 Minutes



Appendix 17: Individual Practice Statements - Level of Agreement

Statement	% Disagree (1-2)	% Neutral (3)	% Agree (4-5)	M	SD
I vary my approach to practice dependent on upcoming performance needs and expectations.***	8.4% (n = 19)	4.9% (n = 11)	86.7% (n = 196)	4.23	1.01
My practice varies dependent on how familiar I am with the repertoire being studied.	8.4% (n = 19)	7.1% (n = 16)	84.5% (n = 191)	4.17	0.95
Each practice session differs due to my needs for technical and musical development.***	16.8% (n = 38)	15.9% (n = 36)	67.3% (n = 152)	3.65	1.11
I follow a routine that varies little from one practice session to the next.	41.2% (n = 93)	20.4% (n = 46)	38.5% (n = 87)	2.92	1.16
My practice regimen is consistent, with each day's practice closely resembling other days.	43.4% (n = 98)	19.9% (n = 45)	36.7% (n = 83)	2.87	1.26
Each practice session addresses a different set of needs with little similarity between one session and the next.	41.6% (n = 94)	31.0% (n = 70)	27.4% (n = 62)	2.80	1.08

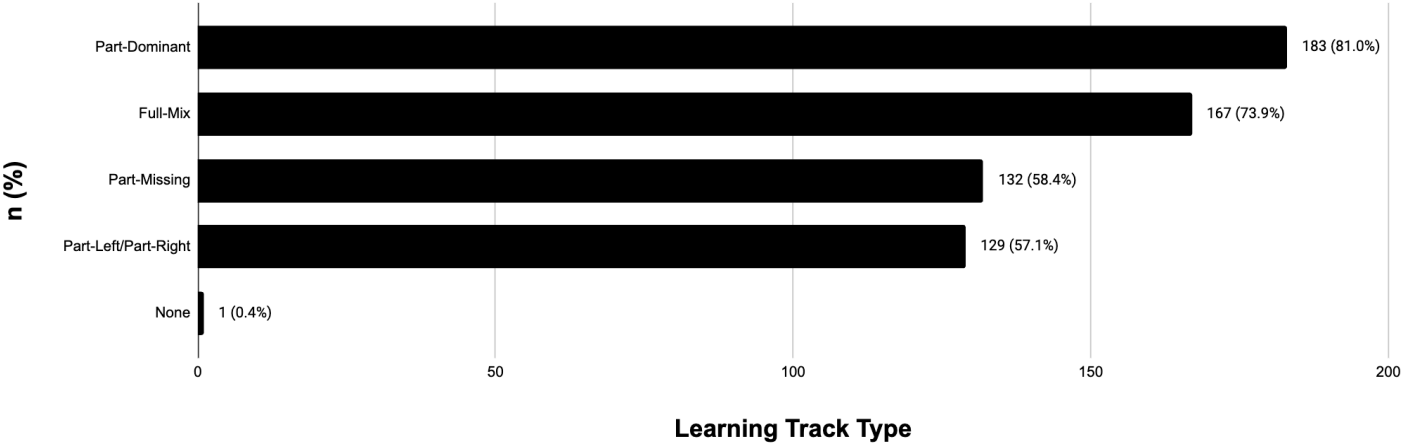
Note: Responses were on a Likert-Type Scale from Strongly Disagree (1) to Strongly Agree (5).

*** Significantly lower than Summitt and Weidner (2022) at 0.01 level of significance

** Significantly lower than Summitt and Weidner (2022) at 0.05 level of significance

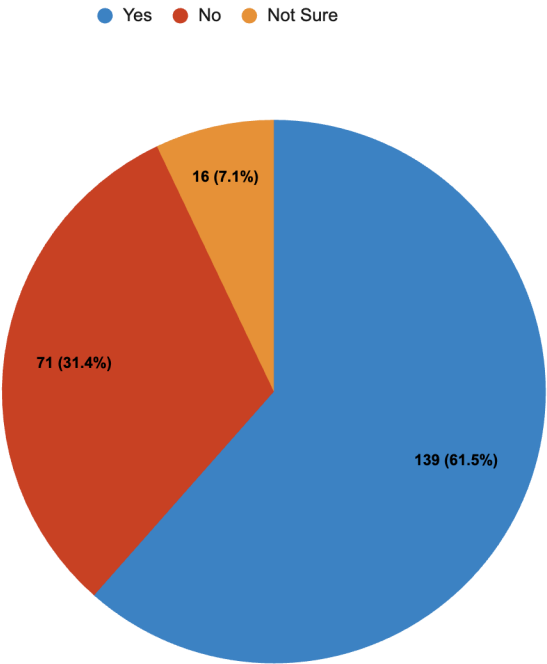
Appendix 18 - Learning Track Usage

Which type of learning tracks do you regularly utilize?



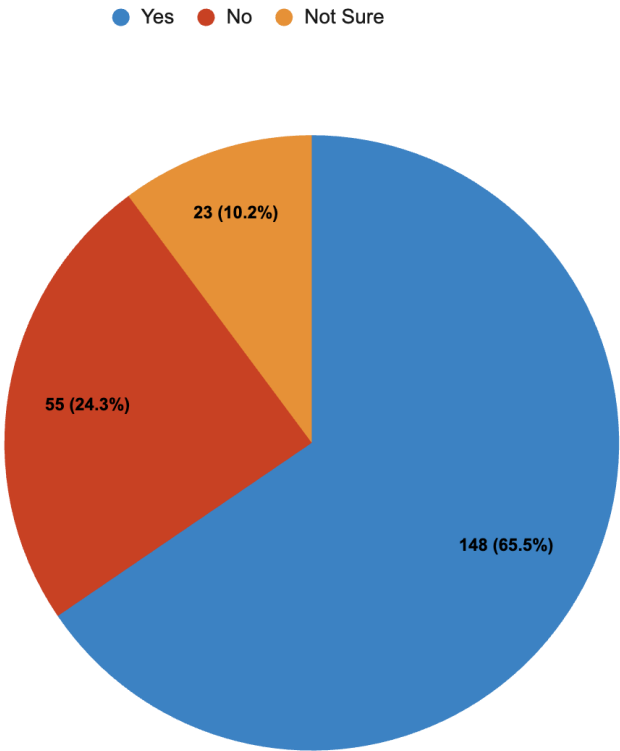
Appendix 19 - Chorus Verification Methods

Do your chorus(es) use any methods to verify that members are meeting the musical expectations of the ensemble (e.g. required recording submissions, music learning audits)?



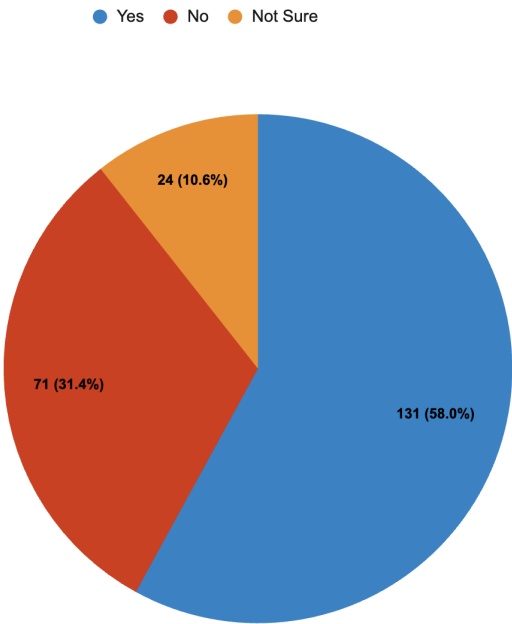
Appendix 20 - Sufficient Practice to Meet Chorus Expectations

Do you feel that you spend an adequate amount of time practicing singing to meet your chorus(es)' musical expectations?



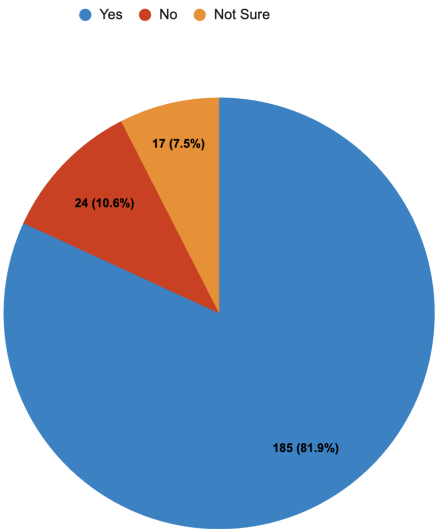
Appendix 21 - Sufficient Practice to Meet Personal Goals

Do you feel that you spend an adequate amount of time practicing singing to meet your personal goals?



Appendix 22 - Chorus Leader Education on Music Learning

Do your chorus leaders provide education and resources related to how to learn music effectively and efficiently?



Appendix 23 - Chorus Leader Education on Practicing Singing

Do your chorus leaders provide education and resources related to how to practice singing effectively and efficiently?

