Tone Quality Preferences in a Recorded Sample of a Child's Singing Voice

Emily Dawn Williams
TONE QUALITY PREFERENCES IN A RECORDED SAMPLE OF A
CHILD’S SINGING VOICE

By

EMILY DAWN WILLIAMS

A Thesis submitted to the
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The members of the committee approve the thesis of Emily Dawn Williams on March 30, 2010.

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The Graduate School has verified and approved the above-named committee members.
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ABSTRACT

The purpose of this study was to investigate listeners' tone quality preferences in a child's singing voice. Research questions were: a) Do musicians have expectations regarding the ideal tone quality for a child's voice? b) Will bright and dark manipulations change the listener's perception of the child's singing tone? Several experts in the field of children's choruses with over 22 years of experiences assessed a recorded sample of a child singing which was manipulated to produce enhanced or reduced upper and lower partials thus creating darker and brighter tone qualities relative to the original recorded child voice. Random orders were used to present the original sample, dark sample, and bright versions to participants. Participants were randomly selected graduate and undergraduate music majors (N = 78). Raw data for the tonal preference measure consisted of individual's ratings for each version on a 5-point scale. A repeated measures ANOVA was used to test differences between the participants groups and the participants' perception of the three tone quality versions. Results showed no significant difference in ratings between participant groups (undergraduate vs. graduate). A significant difference was found among the tone quality conditions: Differences were found between the bright tone and the dark tone as well as the bright and original tone, but no difference was found between the dark tone and normal tone.
CHAPTER1

INTRODUCTION

Sound is a sensation produced when hearing organs in the ear translate vibrations transmitted through the air that are then interpreted by the brain. Since the sensation of sound depends on each individual’s organs, limitations and learning perception of sound is different for every individual. For a musician, understanding general perceptions and preferences of sound is crucial for a successful performance or other musical experience. There are various musical issues to examine, depending on medium of tonal creation. Many studies have been done regarding aspects such as tone quality, timbre, intonation, and pitch. These elements can then be transferred to understanding specific musical endeavors, such as singing.

Seashore (1942) defined tone quality as a characteristic of a musical tone dependent on the range of possible tones and possible changes in the spectrum from wave to wave for as long as the tone is sustained. Therefore, from an experimental point of view, tone quality can be described through concepts of timbre and sonance. Objective factors concerning tone quality, however, depend on words and images related to the tone. Further, Seashore stated that tone quality lies in the combination of many factors, including fundamental pitch, fundamental frequency, and acoustical aspects of the sound such as pitch, loudness, time, and timbre.

A study by Ely (1992) examined the effect of timbre on intonational performance and perception. The study focused on musicians’ intonational acuities through use of a listening and performance task. Results indicated that timbre has a significant effect on subjects’ abilities to detect intonation problems but not their ability to play in tune.

A study by Wapnick & Freeman (1980) examined the effects of dark-bright timbral variations on the perception of flatness and sharpness, dark-bright timbral variation. Results found a significant number of errors made in trials involving a change in timbre as opposed to no change in timbre. These findings suggest that tone quality is an important factor in pitch discrimination, and intonation is a crucial aspect of all musical ensembles.

Powell (1991) studied vowel color and intonation. The study demonstrated that intonation requires more aspects than sharp and flat, because color of vowels influence intonation and pitch. A study by Madsen, Geringer, & Heller (1991) compared good versus bad intonation of accompanied and unaccompanied vocal and string performances using a CRDI. Results indicated that subjects easily discriminated between good and bad intonation. Further, Madsen and Geringer (1982) researched tone quality vs. intonation. Manipulation for the recorded stimulus in this study involved instruments quality and intonation. Results found that it was possible for subjects to discriminate
vocal quality and intonation differently in familiar melodies, but that poor quality mixed with
sharpness was the easiest to detect. It should be cautioned that it is possible subjects discriminate
quality and on intonation differently in familiar melodies.

Research has also been done regarding tone quality and pitch discrimination. A study by
Geringer, (1976) researched the directions and magnitude of mistuning. The study found that
excerpts were more often tuned sharper and that the speed of presentation affected both sharp-flat
responses. Results also indicated an obvious tendency to tune the excerpts sharper than their
recorded pitch level.

Geringer & Madsen (1981) studied aural discriminations and preferences for tone quality and
intonation. In this study, music and non-music subjects were asked to respond to different
performance conditions of oboe-flute duets. Results indicated that subjects were able to correctly
judge examples as being in tune or of good quality when compared to examples out of tune or of
poor quality. However, in other comparisons, subjects seemed to identify and listen to the better
overall performance as opposed to specific discriminations of good intonation or quality. This raises
and important question: What is the audience listening for?

Speaking voices, solo voices, and choral voices differ, according to a study by Ternström
(1991). The study examined the physical and acoustical factors that interact with the singer to
produce the choral sound. Results also identified that most people who participate in a musical
experience do so through singing as choir member.

First musical experiences often occur in the elementary music classroom, where singing is a
core element. Levinowitz et al. (1998) measured singing voice development in the elementary
general music classroom. The study was designed to understand the dependability of children's use
of their singing voice when singing a song in a major mode and when singing a song in a minor
mode, and provide an understanding of the expectation for the use of the singing voice in students
from Grades 1 through 6. The results indentified five measures of children’s vocal development, from
children who are unable to sustain tones through singers who have full use of their singing voices.

A study by Goetze, (1985) examined factors that affect young children's singing. The study
specified two factors, individual singing versus unison singing with others and text versus singing on
a neutral syllable, and their affect on accuracy. Excerpts were measured according to pitch level
accuracy as well as how close the melodic contour was followed. Results indicate that subjects sang
more accurately when singing individually than when singing in unison, and with more accurate pitch
when singing on a neutral syllable "loo". Further, girls sang more accurately than boys, especially
during unison singing with the difference between boys’ individual and unison responses greater
than for girls.

A study by Goodwin (1980) investigated the acoustical aspects of individual voices. The
focus was on choral blend, so the study analyzed solo singing versus unison ensemble singing.
Results indicate that, in contrast to solo singing, singing with an intention to blend (as in choral singing) had slightly stronger fundamental frequencies as well as fewer and weaker upper partials. Formants are also affected by choral singing.

Ternström & Sundber (1989) examined formant frequencies of choir singers. Results revealed low use of formant frequencies in speaking versus singing. Moreover, the study determined that vowels determine blend in choir, thus affecting the overall sound and tone of the ensemble.

Children’s Choir Director Bartle explains that in addition to posture and breath, the sounds of pure vowels are one of the core foundations of a beautiful unified choral sound (1993). Vowels directly affect tone quality, which further affects intonation according to Votaw, a study that examined factors of intonation (1931). Additionally, two aspects that directly affect the choir’s tone are correct, or incorrect, use of head tone, and unified vowel sounds (Allcock & Bridges, 1991).

One children’s choir director warns of the common misuse of children’s natural singing voice (LaTurno, 1988). LaTurno studied developing young choral singers and found that the natural voices of children, for the most part are misused, especially when children urged to “sing out” causing strain. These finding raise the question of why directors of young children always ask for them to “sing out.”

Numerous studies have investigated the various aspects of children’s voices, including pitch matching, blend, and boys versus girls singing voices. In a study involving elementary school children and their concept of tonality, maturational development, vocal range, Wassum (1980) tested the “learned” concept of tonality. Results found tonality is not significantly related to voice range. Results indicate that tonality is a ‘learned’ concept, not significantly related to voice range. The study compared scalar singing to song singing and concluded that students best grasp the concept of tonality when teachers consistently teach both tasks early on in development. Wassum (1980) also found a relationship between range and age. Wassum’s research advocates that the concept of tonality is learned and not significantly related to voice range, which is developed through age and training.

Welch (1986) studied singing ability by specifically analyzing the continuum of ability, pitch, accompaniment, and range. This study found that level of development affects a child’s singing ability. Specifically, vocal pitch accuracy is affected by training and musical context.

Several investigators have studied children’s pitch performance. A study by Yarbrough, Green, Benson, & Bowers (1991) supports Welch’s (1986) findings. The study examined the effects of different vocal models, modes of responding, and grade levels on the pitch-matching accuracy of children in elementary and middle school. The study used different vocal models (male and female) as well as different educational techniques (Curwen hand signs versus a neutral syllable, “la”). Although results yielded no significant differences among response modes, a significant difference was found between correct responses in relation to the sex of the vocal model. A significant
difference was also found between correct responses by kindergarten vs. eighth-grade subjects, but there were no other significant differences among the grade levels.

In a pitch-matching study that compared perception and production, Demorest (2001) examined junior high boys in choir as they attempted to match a specified pitch. Whereas, Joyner (1969) defined "monotone" singers as a singer who cannot reproduce the tonal shape in an identifiable way. Joyner came to this conclusion using a detailed singing examination designed to test the definition.

Welch (1985) found that a singer with poor pitch lie on a continuum and decrease with age, although boys outnumber girls. Welch (1985) points out that training and musical context affected vocal pitch accuracy, but by understanding how children learn to sing and recall information, vocal pitch production and pitch-matching accuracy can improve. The study acknowledges poor pitch matching as a disability in which a child has an error labeling pitches, and can be treated with training.

Welch’s finding are supported by that of Davies and Roberts (1975) who found that gender and age affect “poor pitch singing.” The study examined pitch-matching in relation to sex and age. The results found the monotones instances decreased with age. Results also indicated that most pitch problems improve with age, but boys typically experience more pitch difficulties than girls. Further, Geringer (1983) investigated pitch-discrimination ability and age. The study found a significant relationship between pitch-matching and pitch-discrimination abilities of preschool and fourth-grade students (though only among the high ability fourth graders).

Green (1994) and Cooper (1995) found conflicting results regarding gender and unison versus individual singing and its effect on accuracy. Cooper (1995) examined elementary age students vocal pitch accuracy in relation to grade level, gender, and the presence or absence of another unison voice. Results found that fourth graders were significantly more accurate than third graders under both conditions, but neither gender differences nor individual and unison accuracy were significantly different.

Green (1994) also investigated the effects of gender and maturation and unison vs. individual singing on the vocal pitch accuracy and singing ability of elementary age children. Results indicated, contrary to Cooper (1995) that children, no matter the grade level, sang more accurately when in a unison group of peers than individually. Both group and individual scores improved with grade level. Finally, also in contrast to other research, Green found gender affects accuracy because girls in the study sang more accurately than boys in both individual and group unison situations.

Children’s choir pedagogues use various words to describe the sound of children’s voices. In the book “Conducting the Elementary School Chorus,” Swears (1985) outlines the fundamentals of good choral singing, which include: good singing posture, breathing, diction, tone quality, balance, blend, and intonation. Swears offers a step-by-step guide that gives elementary choral teacher a
complete how to for building a program including: how to develop the child’s voice, work with underdeveloped singers, develop a children’s choir, teach part singing, organize a successful rehearsal, select appropriate music, conduct, and prepare for concerts. Swears points out that upper elementary age students reach their peek of child vocal development, which enables them to create a vocal timbre that is characterized by head voice, which is clear and resonant.

Stultz (2007, 2008) produced a book series organized by the singer’s age. A children’s choir pedagogue, Schultz writes about training the young singer, techniques for building good intonation, and selecting and evaluating fine choral literature. In book one, Stultz (2007) acknowledges that children’s bodies are small and therefore they sing “small,” but states that with proper training they can create a tone that is clear, beautiful, and unique. Stultz addresses in book two that children are often allowed to sing out of tune and in a shouting quality, but advocates that by using proper technique one can train children to sing in their head voice (Stultz, 2008).

Allcock and Bridges also compiled a book for choral directors detailing techniques for developing a child’s singing voice as well as planning and teaching strategies. According to the authors, tone is improved by using correct posture, proper breathing and clear diction head tone and vowel uniformity affect as well. Pedagogues Allcock and Bridges (1997) further define tone is the quality or sound of a choir and the unique tonal quality of a good children’s choir can be described as clear, flutelike, open, spinning, focused, bright, or pure.

There is little research available regarding the individual training of children’s voices, Phillips (1986) studied child’s singing voices by analyzing two training approaches (song and formalized) and two methods of vocal education (expression and technique. Phillips (1986) concluded the lack of research in the area of training children’s singing voices is due to outside factors such as time and the inconsistency within each child. However, results of the studied revealed that both modes of training relate to a child’s vocal development.

In contrast, Barlow and Howard (2002) found that training a young voice had an effect on singing voice production, especially female singers, however pubertal changes effect both sexes, especially males. This study focused on the voice changes of child and adolescent subjects undergoing singing training. Barlow and Howard (2002) recognized that vocal pedagogues have varying beliefs regarding the age at which singing training of a child should begin, and different ways in which male and female children should be treated, but “beliefs” often lack scientific scrutiny, causing discrepancies between vocal coaches and choral directors. These results indicated voice source characteristics of subjects could be categorized according to age, gender and the level of vocal training received. Findings also identified a difference between female and male subjects in relation to development and production. Barlow and Howard (2002) concluded that the process of training a young voice creates a measureable effect on the singing voice production of the child, especially in females.
Historically, a child’s tone was dictated by the cathedral choir; not until the past decade have girls been allowed to join cathedral choirs, because of a “uniqueness” thought only obtainable through boy voices (Howard, 2002). Howard (2002) investigated whether females can perform the traditionally male role appropriately in cathedral choirs, as perceived through the listener. The study was designed to establish whether or not listeners could correctly identify trained girl and boy English cathedral choristers when they are singing. Results suggest that listeners can identify the sex of the choristers singing the top line with an average accuracy of approximately 60%, but the results suggest musical context has a major impact on this perceptual ability. Moreover, boy singers were more often identified than girls, and adult listeners could discriminate between the sexes more reliably than child listeners. These results suggest that the listeners perceive male and female children’s voices differently.

This study was further supported by the findings of Howard, Szymanski, and Welch who found that adult listeners could identify the sex of the chorister singing the top line with accuracy 60% of the time (2002). This study examined perceptual and production difference between male and female English cathedral choristers. Results suggest that there are vocal source differences through puberty exist between boys and girls. Results also found that visual displays could be useful in vocal training with children.

Howard (2002) also studied gendered voice in the cathedral choir. The study, which supports previous findings, further investigated audience perception of male and female voices in order to examine and understand the assumption of male voice “uniqueness” on a perceptual basis. Howard recognized that current data on child and adolescent vocal anatomy and physiology reveal extreme similarities between the sexes until puberty begins. Perceptually, gender differences in untrained children’s singing voices also become more evident as children progress through childhood. However, perceptual data regarding the trained chorister is less concise, which suggests that there is potential for female choristers to be perceived as male, depending on the choir. Howard infers that traditions, expectations, and cultural practices of the environment where the choirs are hosted influence these perceptions.

Napoles, (2009) replicated the Howard, Welch, Szymanski (2002) study about perception of girl’s versus boy’s choirs. Napoles extended the original study to include Argentinean and American. The results are like that of Howard, Welch, and Szymanski, but also infer that American and Argentinean listeners are very similar in their perceptions of boy choirs and girl choirs, and both groups were challenged to tell the two sexes apart. This raises the obvious question, to which tone are these listeners attending?

Therefore, further investigation needs to aim at a more detailed understanding if children’s singing voices, aspects of singing, such as overall sound, and a listener’s perception of this sound. The object of the present study was to manipulate upper and lower partials of a child’s vocal
performance to see if the change affects listeners' perception of the singing tone by identifying what listeners' perceive as the ideal children's vocal sound. The current study seeks to answer the following research questions: a) Do vocally trained musicians have specific expectations regarding the ideal sound for a child's voice? b) Will bright and dark manipulations change the listener's preference for the child's singing tone quality?
Participants in this study were randomly selected graduate and undergraduate music majors \((N = 78)\). Music majors were defined as students enrolled in a music program at a large southeastern university. Participants listened to a single set of three excerpts twice and were asked to respond to each excerpt in relation to what their ideal sound of child’s singing voice should be. A counterbalanced order was used to help control for order effect. Participants were asked to listen to three excerpts that were played twice then completed a form (Figure 1), which included participants verbally describing each excerpt as well as rating it in relation to his/her preferred ideal sound.

A recording was made using a 4th grade girl who sang “My Bonnie Lies Over the Ocean” as naturally as possible. The recording was made in a small recording studio with a Studio Projects C1 microphone (http://www.studioprojects.com/c1_tech.html). Digidesign ProTools and its built-in plugin “4-Band EQ III” software, Digidesign 96 I/O Audio Interface hardware, and a Focusrite Octopre LE Microphone Pre-amp were used for recording and manipulation. To create the bright tone-quality and dark tone-quality excerpts, manipulation was done on the original recording by removing or adding upper and lower partials (Figure 2 and 3). This recording was evaluated by a panel of experts and deemed to be appropriate in that it was made with a child singing without stress in a comfortable range.

Participants listened to recorded material in small groups of 5-7 in a soundproof room using high quality speakers with a CD player connected to an amplifier.

Chapter 3
CHAPTER 3

RESULTS

This study investigated possible differences between preferences for each version of a purposefully altered child’s singing voice excerpt and education level of listeners, undergraduate or graduate music majors. Raw data for the tonal preference measure consisted of individual’s ratings for each version of the excerpt. Ratings were given on a Likert type 5-point scale, with 1 indicating the sound was least like their ideal children’s singing tone and 5 indicating the recording was most like their ideal, preferred sound.

Descriptive data are shown in Table 1. It can be seen that standard deviations were similar across groups and stimuli and ranged from .79 to 1.04. Mean preference ratings were lowest for the bright tone quality version ($M=3.08$). Means for the dark and unchanged versions were similar ($M = 3.64$ and 3.6, respectively).

A repeated measures ANOVA was used to test differences between the participants groups (undergraduate versus graduate level) and the participants’ perception of the three tone quality versions. Results of the analysis showed no significant difference in ratings between participant groups (undergraduate and graduate), see Table 2. As shown in Table 3, a significant difference was found between the tone quality conditions, $F (2, 152) = 10.144, p < .05, \eta^2 = 0.12$. Differences were found between the bright and dark tone as well as the bright and normal tone, but no difference was found between the dark and normal tone. Figure 4 shows the means of graduate versus undergraduate participants for each excerpt. Neither group preferred the bright excerpt, but the graduates slightly preferred the darker quality, whereas the undergraduates preferred the normal unaltered tone.
CHAPTER 4
DISCUSSION

Research questions included a) Do musicians have expectations regarding the ideal tone quality for a child’s voice? b) Will bright and dark manipulations change the listener’s perception of the child’s singing tone?

Results of this study show the level of education does not affect preferences in tone quality of a child’s singing voice. However, the dark version was slightly preferred by graduate students. Figure 4 shows the means of graduate versus undergraduate participants for each excerpt. Neither group preferred the bright excerpt, but the graduates slightly preferred the darker quality the most, whereas the undergraduates preferred the normal tone. Further investigation would clarify if these expectations were due to experience with children’s voices or preference for working with more developed singers. Looking at the graph one would have anticipated two parallel lines, but instead the lines cross. This confirms that preference responses are not independent of tone quality. The graph further raises the question, why is there more agreement between the level, undergraduate or graduation, and preference for the dark tone, when the mean preferences for the light and normal are further apart? More research is needed to clarify this interaction.

Written comments from the study indicated that breathiness was a common factor for which participants listened. With removal of the upper partials in the dark excerpt, the sound was less breathy. This could indicate that listeners prefer a less breathy sound, but more research is needed in this area.

Some participants commented on the “muffled” sound and identified what manipulation was done to the recording or were confused by the fact that the recording sounded like the same person. Specifically, one response concluded the questionnaire with, “I was waiting to hear a kid yelling or using their chest voice, but this sample had a lovely head voice even though you manipulated the sound somehow.” Additionally, more qualifying questions about the participants might be included in order to find out their experience with children’s voices. Another extension could include the use of a chorus excerpt, or choose from various chorus recordings of the same song and see if listeners prefer a certain children’s chorus sound. In future research, live recordings and new technologies might rectify these issues.

No significant difference was found between the dark and normal excerpts. This could be because the lower partials enhanced for the dark excerpt did not have a large impact on the sound quality because the singer originally had few partials in the low frequency region, thus making the normal and dark versions appear very similar. While significant differences were found between the
bright tone and the dark as well as the bright and normal tone, participant’s comments for the bright excerpt commonly referred to breathiness, lack of support, and thinness of sound. Perhaps a more supported, resonant sound was desired. More research is needed in this area. Investigation into children’s choirs’ tones in addition to solo child voice would prove helpful in this area as well.

Findings from the written comments from this study support results from many studies of children pitch-matching and boys versus girls singing voices (Demorest, 2001; Goetze, 1985; Howard, Barlow, Szymanski, & Welch, 2000-2001; Joyner, 1969; Napoles, 2009; Welch, 1986; Yarbrough, Green, Benson, & Bowers, 1991). Almost every participant commented on the ability to match-pitch or number of perceived correct pitches. A few participants commented on the sex of the singer in the recording, but did not say how it effected the participant’s perception of the sound quality overall.

Comments also support pedagogue’s views on what a child’s voice should be. Almost every music education major (graduate and undergraduate) wrote comments about head voice and over half of the responses specifically used the word “light” or “clear” in describing quality of sound. Obviously, more studies on preferred tone quality in children’s voices and how to create that tone would be beneficial.
APPENDIX 1

FIGURES AND TABLES

Child’s Voice Perception Study

You will hear three excerpts, 2 times. For each of the excerpts, please notate a couple of words to describe the excerpt then rate the tone on a scale of 1-5 with 5 being the most like your ideal children’s sound.

Least Ideal------------------------------------------------------ Most Ideal

EXCERPT #1
1  2  3  4  5
Describe the Sound:

EXCERPT #2
1  2  3  4  5
Describe the Sound:

EXCERPT #3
1  2  3  4  5
Describe the Sound:

Figure 1, Questionnaire given during study
Figure 2. Wave manipulation for bright tone excerpt
Figure 3, Wave manipulation for dark tone excerpt
Figure 4, Mean Scores for Each Excerpt Based on Level of Education
Table 1

*Mean Scores and Standard Deviation for Each Excerpt*

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<th>Level</th>
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<td></td>
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<td><strong>Total</strong></td>
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<tr>
<td>Dark</td>
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<tr>
<td>Graduate</td>
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<td>Undergraduate</td>
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<td><strong>Total</strong></td>
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<td>Normal</td>
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Table 2

Two-way ANOVA Results

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<td>Tone Quality</td>
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Table 3

Pairwise Comparisons

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<tr>
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<th>Significance</th>
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<tr>
<td>Bright Dark</td>
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<td>0.001</td>
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<tr>
<td>Normal</td>
<td>-0.531</td>
<td>0.000</td>
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<tr>
<td>Dark Bright</td>
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<td>0.001</td>
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<tr>
<td>Normal</td>
<td>0.071</td>
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<td>Normal Bright</td>
<td>0.531</td>
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<tr>
<td>Dark</td>
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Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 3/12/2010

To: Emily Williams

Address: 472 W. Jefferson St. Apt. 303
Dept.: MUSIC SCHOOL

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Preference and Perception of Tone Quality in a Recorded Sample of a Child's Singing Voice

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 3/11/2011 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: John Geringer, Advisor
HSC No. 2009.3572

2009.3572 ICF.pdf (25.7 KB)
FSU Behavioral Consent Form
“Preference and Perception of Tone Quality in a Recorded Sample of a Child’s singing Voice”

You are invited to be in a research study on perception of a child’s singing voice. You were selected as a possible participant because you are a music major enrolled at the College of Music at Florida State University. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Emily D. Williams, College of Music, Florida State University.

Background Information:

The purpose of this study is to determine if there is a significant difference between preference of one children’s voice tone versus another.

Procedures:

If you agree to be in this study, we would ask you to do the following things:
1) Listen to three short excerpts and note in a couple words how the sound matches your ideal sound you expect to hear.
2) Listen to the excerpts a second time rating each excerpt on a 1-5 scale with 1 being the lease ideal sound and 5 being the most ideal sound.
The length of the study is approximately 5 minutes.

Risks and benefits of being in the Study:

The study has no known risks.

There are no known individual benefits for participating in this study.

Confidentiality:

The records of this study will be kept private and confidential to the extent permitted by law. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Emily D. Williams, a graduate student at Florida State University. You may ask any question you have now. If you have a question later, you are encouraged to contact me at Florida State University College of Music, 850-644-4565, edw08c@fsu.edu. You may also contact my professor, John M. Geringer, 850-644-5787, jgeringer@fsu.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at humansubjects@magnet.fsu.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature__________ Date__________

Signature of Investigator__________ Date__________

REFERENCES


Emily Dawn Williams

In May of 2008, Emily Williams received a Bachelors of Music Education from Louisiana State University. Under the advisement of Dr. Clifford K. Madsen, she obtained her Master’s in Music Education degree from the College of Music at Florida State University in spring of 2010. In the fall of 2010, Emily will begin teaching middle school chorus in a public school. Emily is an active children’s choir clinician and is interested in developing tone, musical understanding, and analyzing preference with beginning and developing musicians.