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THE EFFECT OF A SUMMER CHOIR CAMP EXPERIENCE ON
CHILDREN'S SHORT-TERM AND LONG-TERM
SINGING VOICE ACHIEVEMENT

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Abstract

This study stemmed from a need for singing instruction that I identified within my own church community after hearing the children's choir sing. I heard great potential for that group of children but they needed proper instruction for better use of their singing voices. The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp. The principle questions investigated were to see if children's use of singing voice improved after a one-week choral experience and if the improvement of singing voice is retained at the end of the summer.

This study took place over one week in the summer of 2011. Children (n=15) participated in a children's choir camp that focused on singing and musicianship through singing songs, listening activities, and the use of solfège. With the use of the Singing Voice Development Measure, the participants' singing voices were recorded and rated three times: once at the beginning of the week, once at the end of the week, and once at the end of the summer, approximately two months after the camp was held. Based on the analysis of the data, the children's singing voices did not significantly change after a one-week choral experience. However, the children's singing voices significantly improved over the summer when singing on text but not on a neutral syllable.

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CHAPTER ONE – INTRODUCTION

BACKGROUND

Imagine that you are at a Christmas Eve children's mass, and it is the point of the mass where all of the children act out the Nativity and sing the Christmas carols that correspond to the story. It is hard not to experience the joy that these nine children are feeling on the eve of Christmas, especially when you can see in their faces how much they love the music they are singing. This was my experience this past Christmas Eve at my church.

Unfortunately, as a singer and music educator, I could not help but hear the poor vocal technique used by the children in this choir. It was not that their sound was bad; it was just apparent that they were untrained. As I watched the Nativity play, it concerned me to hear children singing in an unhealthy manner.

Suddenly, it dawned on me that *I* have all of the necessary abilities to hone these children's voices, so why was I not helping? I decided that I needed to use the knowledge and talents that I have to teach and share my experiences with these children. They so obviously love music and singing, so it would be unfair to them if I did not help them find their voices.

As a child, I had the opportunity to participate in a community children's choir and attend summer music programs. Since I was six years old, I have always had exemplary choral directors who were good vocal models and taught their choir members to sing in a healthy, appropriate way. Not only did I learn great repertoire, but I was also given the gift of my voice in that ensemble.

Based on my positive experiences, I believed a summer music program would be a vehicle for helping these children. The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp.

THEORETICAL FOUNDATION

ALL CHILDREN CAN SING

It has been established through many studies that all children can sing (Goetze, et al., 1990; Rutkowski, 1989). “Singing, alone and with others, a varied repertoire of music” is the first National Standard of Music Education (Consortium of National Arts Education Associations, 1994). Singing is a way in which people express themselves -from singing in worship to singing songs on the playground to singing “Happy Birthday” to friends and family.

Singing comes naturally to most children if it is nurtured. Berger and Cooper (2003) investigated the importance of music in preschool music settings. The results of their study were that children explore music on their own and with the help of instructors. Also, children’s musical play was enhanced when the adults in the room valued each of the musical utterances of the children. While the singing voices of children improve with age and instruction, all children are born with the ability to sing (Goetze et al., 1990).

HOW CHILDREN CAN BE TAUGHT TO SING

Though all children can sing, many need proper instruction in order to use their voices to their full ability. For instance, the pedagogue Edwin Gordon and other researchers have shown that through instruction “non-singers” or out of tune singers can improve their voices. “Non-singers” are how he refers to those who cannot access their head voice; as a result, through instruction in small groups and age appropriate music, the

“non-singers” can become “singers,” or those who can sing in their head voice (above a B-flat4). Also, Gordon believed that a lack of understanding of the tonal center contributes to the “non-singers” lack of singing ability (Rutkowski, 1985).

Some ways that have been found effective in helping children learn to sing include singing in small groups (Green, 2006; Rutkowski, 1996; Rutkowski&Miller, 2003). In Green’s study, the participants scored higher on tests when they were singing in unison with classmates than when they were singing individually. But in Rutkowski’s study (1996), it was shown through the use of Singing Voice Development Measure (SVDM) that the students whose general music classes included singing in small groups and individually improved significantly better than children who only sang in a large group.

The studies differed in that Rutkowski’s study showed that students who sing individually improved while Green did not test individual singing. Also, Rutkowski&Miller (2003) showed that students who sing in small groups or individually in general music classes will improve regardless of effective teacher feedback. Overall, it seems that when children sing in small groups and individually they access their singing voices and learn proper vocal technique more easily.

PURPOSE

The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp.

The principle questions investigated were:

1. Does the children’s use of singing voice improve after a one-week choral experience?
2. Is the improvement of singing voice retained at the end of the summer?

CHAPTER TWO – LITERATURE REVIEW

INTRODUCTION

It has been established through many studies that all children can sing. Children also naturally have a prominent singer's formant. This allows their voices to carry and to be used without tiring. In this chapter, I review literature that shows how children can be taught to sing, what repertoire is appropriate for young children, and how a community choral ensemble can be developed.

STRATEGIES FOR TEACHING CHILDREN HOW TO SING

Many studies have investigated ways in which children can be taught to sing. These strategies range from physical activities such as breathing to systematic approaches useful in a choral setting over a long period of time in order to see improvement. Specific instruction and good vocal modeling is important for children as they are learning to use their voices (Yarbrough et al., 1992).

Aitchison and Phillips (1977) investigated how a vocal instruction method as well as measuring the respiration of students affected the singing performance of general music students in grades 4, 5, and 6. While the respiration measure did not affect the vocal range of the students, it does relate to the overall singing of the students. The researchers studied the effects on vocal instruction by employing measures of high pitch, low pitch, total range, and pitch accuracy. They also studied the effects on respiration by measuring levels of vital capacity, peak flow, and duration. The two groups studied were a group that used a singing curriculum enhanced by vocal pedagogy techniques and a control group that used a traditional song approach. Overall, the ability to sing higher and lower, vital capacity, and breath control were improved with instruction in vocal pedagogy. However, vital capacity seems to only improve with age based on this research.

Phillips(1985) discussed in a pedagogical article two primary ways in which teachers teach their students how to sing – vocal pedagogy drills and the song approach. The song approach is what is used most prevalently in schools. The primary focus is teaching songs to students, with the secondary focus on teaching the children how to sing. While this approach lends itself to providing the students with a large repertoire of songs, it does not systematically teach the students how to sing well. As a result, in this article Phillips suggested a balance of both vocal pedagogy and the use of a large repertoire of songs in order to improve the singing voice of elementary aged students.

Effective vocal models for children’s singing have also been investigated. Yarbrough et al. (1992) studied how a vocal model with vibrato affects the singing accuracy of certain and uncertain singers. The researchers had a female sing a descending minor third (G4 to E4) once with vibrato and then once without vibrato while the participants echoed the pattern. Another was a child model singing the descending pattern with 100% accuracy. The researchers found that the participants responded the best to the nonvibrato female model as opposed to the vibrato or child models.

Whether it is best to have children sing in small groups or individually has also been investigated. Results for these studies differed. For instance, Green (2006) tested the voices of 241 students in Grades 1, 2, 3, and 5. The participants were recorded singing a simple children’s song both individually and in unison singing. The result was that the participants scored higher on tests when they were singing in unison with classmates than when they were singing individually.

Another way that has been found effective in vocal instruction for children included singing in small groups and individually (Rutkowski, 1996). In Rutkowski’s study (1996), it was shown through the use of Singing Voice Development Measure (SVDM) that the

students whose music lessons included singing in small groups and individually improved overall over the course of the study. This included students who were in traditional large-classroom settings.

Some studies have shown that instruction and delivery of a vocal model such as a female or child's voice are effective for a child to become a successful singer (Yarbrough et al, 1992). In my own instruction, I intend on instilling sound vocal techniques in my students through breathing and singing exercises as well as learning songs by rote. I also will use a nonvibrato vocal model for the students, particularly during singing games where they are echoing patterns so they can be as successful as possible.

SELECTION OF REPERTOIRE

The selection of repertoire is an important aspect that needs to be considered for children to sing well. For children who are on the cusp of finding their singing voices, it is important that the repertoire chosen is appropriate for their developmental level. In addition, musicianship skills are essential for children to learn; the use of repertoire that allows students to learn musicality and sightreading skills gives students the skills they need to be lifelong singers.

Broeker (2000) described two ways in which choir directors develop a choir program with particular emphasis on the process of choosing repertoire. One is the acquisition of a vast variety of repertoire for one's ensemble. The second, though equally important, aspect is the ability to create a program for a concert from the repertoire that was chosen. The six main criteria discussed in regards to choosing music were text, singability, form, part-writing, accompaniment, and pedagogical implications.

The author included sample programs for three different types of choral programs. One approach was to use themes and groups. These programs focus the choral literature on

a specific theme such as love or a season. Another one of these programs included a program created by grouping. The final example of these programs included a program without a theme or grouping. The author recommended that each kind of program has its place, and that overall the program should lead the listener on a musical journey with varied repertoire.

Rao (1982) provided examples of quality choral literature for treble voices in a children's choir. She included descriptions of each piece, from what language it is in to the historical significance of the piece. She also discussed the meter, tempo, division of voices, and other pertinent information in regards to the appropriateness of the piece for children's voices.

In regards to the division of voices, she described how children sing best in rounds and part-songs as opposed to harmonies such as thirds. Similarly, the pieces must be contextually appropriate for the age range of the singers. These criteria allow for the conductor to choose repertoire that is within the ability level of the choir members. She included quite a few pieces by Benjamin Britten, who was known for writing for children's voices, as well as pieces from varied time periods. Overall, it is a concise yet informative list of quality repertoire appropriate for children's voices.

In summary, through reviewing this literature, I have increased my understanding of good choral repertoire for children's choirs, as well as the specific criteria that should be assessed when choosing music for a children's choral ensemble. For instance, children sing best either in unison or in part-songs and rounds as opposed to harmonies such as thirds. Also, phrases that are melismatic are more difficult for young students to sing and should be avoided. Though my choir will not be capable of singing the more difficult pieces discussed

in some of this literature, it provides a foundation for what will be effective in the choral ensemble.

DEVELOPING A CHILDREN'S CHOIR

Most of the literature pertaining to the development of a children's choir is based on the assumption that the ensemble will be intact for a long period of time. Though my research study choir only met for one week, many aspects of developing a long-term children's choir seemed applicable to my study. The following literature included tips, techniques, and advice from some of the leaders in children's choral music.

Goetze (1988) stated that though one of the goals of a children's choir is to create a beautiful sound, it is important to remember that the choir is capable of making artistic choices and being musical in their interpretation. She iterated that the director must have a thorough knowledge of the score before teaching it to his or her ensemble. Though one of the fastest ways to teach a piece is by rote, it is also important to create independent musicians. The author provided an example of one piece, *Long, Long Ago* (Floyd), and described ways to present that particular piece of music. To begin with, Goetze suggested modeling the first melodic pattern of the piece so the students will become familiar with the melody of the piece. Similarly, she suggested isolating a rhythmic motive that is used throughout the piece for the students to chant or clap. These are practical and accessible ways for students to learn a piece in a short amount of time while still working on their musicianship.

Wilson (2003) discussed the process of running a fourth and fifth grade choir and selecting music for them. It is important to know the need for appropriate activities and songs for the children's grade level. For example, some of the most accessible pieces for a children's choir are songs from the American folk song and African-American spiritual

genres. She believed these are appropriate pieces because they generally use a limited range and are often pentatonic, which is a basic tenant of the Kodaly approach to learning to sing. She also suggested using songs from varied cultures and to have the students sing in the original language. Not only does that provide the opportunity to teach about another culture, it also provides a “sense of accomplishment” for the students by singing in a different language. She also included a list of appropriate songs, separated by genre. Finally, the author discussed the importance of timing for instruction and performances. For instance, the voice is strongest in the beginning of the day; thus, it is better for children to sing earlier rather than later in the day.

In summary, these authors discussed the importance of knowing the ability level and age of the singers in one’s choir. Without this knowledge, one cannot develop a choir that can perform to the best of their ability. In addition, when a conductor knows the level of their choir, they can teach the students so that they learn the best way they can.

CHAPTER SUMMARY

Through these articles, I learned effective ways to teach children how to sing, how to select appropriate repertoire for their level, and procedures that will create a successful learning environment. First, the research shows that children who sing in small groups or individually improve the most in a large-group music class setting. Also, children sing best at the beginning of the day, and as a result, the camp is scheduled for earlier in the morning. Similarly, the type of repertoire that is chosen is the very important for the singing development of the children in the choir. The research and articles that I have reviewed provided a foundation for development of my own research project and music camp.

CHAPTER THREE – METHODOLOGY

PURPOSE

The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp.

The principle questions investigated were:

1. Does the children's use of singing voice improve after a one-week choral experience?
2. Is the improvement of singing voice retained at the end of the summer?

DESIGN OF STUDY

This study used a one-group quasi-experimental design. The instructional period lasted one week in the summer of June 2011. Each participant had his/her voice tested at the beginning of the week prior to instruction, at the end of the instructional period, and again at the end of the summer. The students also sang at the children's Mass at their church on the Sunday following the week of instruction.

SITE

The site used was a Roman catholic church in northeastern Pennsylvania. The instruction took place in the church basement, as well as in the sanctuary. Both the basement meeting area and sanctuary were used for the rehearsals and lessons. This site was chosen because of the primary researcher's affiliation with the church, and also many of the participants were a part of this church's children's choir.

SUBJECTS

The targeted participants (n= 10) of this study were members of a children's church choir from a Roman Catholic Church in a northeastern Pennsylvania community. However,

the program was also open to any children in the community, so the participants included children who were not a part of the full-year choir at the church. The participants were no younger than six years old, and no participants had gone through voice change. As a result, all participants sang in a treble range. The final age range of participants in the camp (n=21) was six to ten years old. However, for various reasons, only 15 students were able to participate in the research study.

INSTRUCTION

Instruction lasted one week (Monday through Friday) from 9 AM -11 AM and culminated with the students singing at the church's children's Mass the following Sunday at 11 AM. Instruction took place in the morning because research shows that children perform better in the morning than in the afternoon (Wilson, 2003). The children's voices were tested at the end of rehearsal on Monday, at the end of rehearsal on Friday, and the third test was administered on August 9, 2011.

The lessons consisted of singing games, activities, and rehearsals. About half of the time was a choral rehearsal, and the other half consisted of activities that strengthened singing voices and musicianship skills. The day always began with a physical and vocal warm-up, followed by singing games, which allowed students to sing in small groups and individually. The lessons consisted of singing games, activities, and rehearsals (See Appendix A for detailed lesson plans).

Because the participants sang at the church's children's Mass the Sunday following the week of instruction, the pieces rehearsed were for that Mass. These hymns were in an appropriate range for the students to sing. The lessons also included activities that incorporated singing and movement into listening activities. Overall, each activity was included to help develop the singing voice of the participants through improving their breath

control, the placement of their voice, and their level of comfort with singing alone and with others. I reflected on each lesson at the end of the day in order to prepare the details for the next day's lesson.

MATERIALS

The primary materials used during the study were a Flip camera, a piano, hymn books, sight-singing sheets, a chalk board, a laptop, and speakers. There were also materials for games that were used, such as pennies, keys, and buttons for the game "Penny, Key, Button," flash cards with solfège syllables, and a ball for the song "Rock, Rock, How I Wander." Because the study focused on the singing voice, the voice was primarily what was used in all instruction.

LISTENING EXAMPLES

The listening examples that were used varied greatly, and they generally served the purpose of transitioning between rehearsals and other activities that were entirely singing. One lesson was a movement-based lesson where the students listened to the "Dies Irae" from Verdi's *Requiem*. My goal for that lesson was to have the students feel more comfortable moving to the music. Another lesson used a movement from *La Moldau* by Smetana. This lesson focused on tone poems and the ability of a composer to tell a story through music. A third lesson began with the children learning the melody to "Simple Gifts," and then listening for this theme in Copland *Appalachian Spring*. Also, a recording of the choir Tuks Camerata (South Africa) singing "Siyahamba" was used to give a cultural context of the piece to the students.

DATA GATHERING TOOL

The tool used to obtain data was the Singing Voice Development Measure (SVDM) (See Appendix B). This measure uses a nine-point scale to rate children's use of singing voice

(Rutkowski, 1996, 2003; Rutkowski&Runfola, 2010). Participants echoed the teacher singing a tonal pattern on text as well as a neutral syllable (“bum”).

PROCEDURES

First, I obtained IRB certification to conduct research on human subjects and then approval to conduct this study. Before a public announcement, I contacted all parents of children in the church choir from a list that I obtained from the church choir director. Following this initial contact, I spoke at each Mass (Saturday 4:15 PM, Sunday 9 AM, and Sunday 11 AM) to advertise the camp.

At the end of each Mass, I stood at the back of the church, and parents signed their children up at that time. At that time, I provided parents with information about the camp including what day and time it was to begin. I collected the phone numbers and email addresses of the parents, and contacted them all the weekend before to verify that their children were attending and to ask them to be present at the beginning of the first rehearsal. At the time of the first meeting, I explained the research in detail to the group of parents and gave the parents the consent forms to complete. After that initial meeting, the parents left, and instruction began.

Both the basement meeting area and sanctuary were used for the rehearsals and lessons. Instruction lasted one week (Monday through Friday) from 9 AM -11 AM, and culminated with the students singing at the church’s children’s Mass the following Sunday at 11 AM.

The children’s voices were tested at the end of rehearsal on Monday, at the end of rehearsal on Friday, and the third test was administered on August 9, 2011. The data were gathered by recording the participants singing with a Flip camera. Each participant was assigned a number on the recording so that they would remain anonymous. Before the

testing, the participants learned the song “See the Bird”, that is used in the SVDM, as a group and practiced repeating phrases in small groups. This way, when the students sang on their own they would be replicating what they had just done in small groups.

For each testing, each participant came to the sanctuary of the church where there was a piano, and I sang a phrase and the participants repeated it back. Half of the group began their singing with text and then neutral syllables while the other half of the group began with neutral syllables and then text. Children were alone with me for the voice testing.

I created a spreadsheet of the subjects’ numbers and their tracks on a CD for two analysts who rated the singing voices based on the SVDM rating scale. The raters were Penn State students who are majoring in music education with a choral music emphasis.

DATA ANALYSIS

To analyze the data, correlation coefficients were generated to determine rater reliability between the two raters. T-tests were used to determine if participants made significant improvement after a week of instruction as well as at the end of the summer.

CHAPTER FOUR – RESULTS

PURPOSE

The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp.

The principle questions investigated were:

1. Does the children's use of singing voice improve after a one-week choral experience?
2. Is the improvement of singing voice retained at the end of the summer?

PARTICIPANTS

The participants for this study were 15 children ages 6-10. The sample consisted of children who were members of a church children's choir as well as members of the community. Nine girls and 6 boys participated in the study.

JUDGE RELIABILITY

Recordings of the children's voices were rated by two judges using the Singing Voice Development Measure (SVDM) (See Appendix B). Intra- and inter-judge reliabilities were determined with a Pearson correlation. Coefficients were high and statistically significant ($p < .01$), indicating that the judges used SVDM in a consistent manner. Intra-judge reliability for Rater 1 was $r = .974$; for Rater 2, $r = .944$. Inter-judge reliability for the children's text performances was $r = .917$; for neutral syllable performances, $r = .953$. It was concluded that the ratings were reliable and valid.

RESULTS

Six sets of scores were analyzed. Three testing times: pretest (A), posttest (B), and final test (C). Two singing tasks: words/text (T) and a neutral syllable (NS). Descriptive

statistics are presented in Table 4.1. The scores represent a sum of two raters' scores. Dividing these numbers by 2 yields the corresponding SVDM rating. For example, a score in Table 4.1 of "3" is a 1.5 – "Inconsistent Speaking Range Singer", on SVDM. T-tests were used to compare means. A significant difference existed between Text B and Text C ($p \leq .03$). No other significant differences existed. Therefore, no improvements were made when singing on a neutral syllable. Also no improvements were made between the pretest and at the end of the week when singing on text, but improvements were made over the summer when singing on text.

Table 4.1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
T-A	14	2.5	10.0	7.893	2.2802
NS-A	14	3.0	10.0	8.143	2.3569
T-B	14	2.5	10.0	7.857	2.4133
NS-B	14	3.0	10.0	8.179	2.3255
T-C	14	3.0	10.0	8.250	2.3184
NS-C	14	3.0	10.0	8.429	2.3685

CHAPTER 5 – SUMMARY AND CONCLUSIONS

SUMMARY

It has been established through many studies that all children can sing (Goetze, et al., 1990; Rutkowski, 1989). “Singing, alone and with others, a varied repertoire of music” is the first National Standard of Music Education (Consortium of National Arts Education Associations, 1994). Singing is a way in which people express themselves -from singing in worship to singing songs on the playground to singing “Happy Birthday” to friends and family.

Singing comes naturally to most children if it is nurtured (Berger and Cooper (2003). Though all children can sing, many need proper instruction in order to use their voices to their full ability. For instance, the pedagogue Edwin Gordon and other researchers have shown that through instruction “non-singers” or out of tune singers can improve their voices. “Non-singers” are how he refers to those who cannot access their head voice; as a result, through instruction in small groups and age appropriate music, the “non-singers” can become “singers,” or those who can sing in their head voice (above a B-flat4). Also, Gordon stated that a lack of understanding of the tonal center contributes to the “non-singers” lack of singing ability. (Rutkowski, 1985).

Some ways that have been found effective in vocal instruction for children include singing in small groups (Green, 2006; Rutkowski, 1996; Rutkowski, 2003). Effective vocal models for children’s singing have also been investigated. Yarbrough et al. (1992) found that children responded the best to a nonvibrato female model as opposed to the vibrato or child models.

This study was conducted in order to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp. The camp was also given because I saw a need for a choral music camp of this nature in my area.

PURPOSE

The purpose of this study was to investigate if children can learn to sing in a healthy manner from participating in a week-long summer music camp.

The principle questions investigated were:

1. Does the children's use of singing voice improve after a one-week choral experience?
2. Is the improvement of singing voice retained at the end of the summer?

METHODOLOGY

The participants for this study were 15 children ages 6-10. The sample consisted of members of the church's children's choir as well as members of the community. I spoke at all Masses in one weekend (Saturday 4:15 PM, 9:00 AM, and 11:00 AM). After each Mass, the primary researcher stood at the back of the church, and interested parents enrolled their children. While there was only a sign up after masses, word quickly spread to other parents who wished to have their children involved as well. Some children were only able to come for part of the week; therefore, they participated in the camp, but they did not participate in the research aspect of the study. Also, all voices were treble; no children had changing voices.

The camp took place at a Roman Catholic church in northeastern Pennsylvania. It lasted one week (Monday through Friday) and instruction was from 9 AM -11 AM each day. The camp culminated with the students singing at the church's children's Mass the following Sunday at 11 AM. The lessons consisted of singing games, activities, and rehearsals.

The participants' singing voices were recorded using a Flip video camera, and the data were organized and given to two raters to rate using the Singing Voice Development Measure (See Appendix B). The raters were both Penn State undergraduate students and music education majors (with a choral emphasis) in the School of Music.

RESULTS

The judges used SVDM in a consistent manner because the correlation coefficients were high and statistically significant ($p < .01$). Intra-judge reliability for Rater 1 was $r = .974$; for Rater 2, $r = .944$. Inter-judge reliability for the children's text performances was $r = .917$; for neutral syllable performances, $r = .953$. It was concluded that the ratings were reliable and valid. T-tests were used to compare means of the judges' ratings in order to answer the research questions.

RESEARCH QUESTION 1: Does a child's use of singing voice improve after a one-week choral experience? Based on the analysis of the data, the children's singing voices did not significantly change after a one-week choral experience.

RESEARCH QUESTION 2: Is the improvement of singing voice retained at the end of the summer? Based on the analysis of the data, the children's singing voices significantly improved over the summer when singing on text but not while on a neutral syllable

DISCUSSION

This was the first experience I had where I was completely and solely in charge of a group of students, and though the results of the study were not very conclusive, I feel as though it was an excellent learning experience for myself and the students. I was very pleased with the enthusiasm and the level of commitment that the students showed because I believe it made for a positive learning environment.

Long-term improvements in children's voices can be made (Aitchenson, 1997; Phillips, 1985; Rutkowski, 1996). My study was rather short in comparison to these studies. It is possible that the short treatment period could have contributed to the different results in this study. While the children improved in singing voice on text from the second to the third test, no other improvements were found. Because other studies have shown that the singing voice of children can improve with small group and individual instruction (Rutkowski, 1996), it can be assumed that these students either did not obtain enough instruction in order to improve over a one week-long choral experience or need more regular instruction in order to improve. Also, the students primarily sang on text during the camp, which may be a cause for their lack of improvement when singing on a neutral syllable in the SVDM.

The small sample size may have also impacted the results of this study. It seems appropriate to look at some individual scores in addition to means. For example, two students were consistently rated between a 1 and 1.5 on the SVDM scale. Neither of these students improved over the course of the study. However, some students did improve between the beginning of the summer and the end. One possible reason that might account for this change is that the students may have been using the techniques that they were taught throughout the summer. While this is an assumption, it may have improved their rating on the SVDM scale at the end of the summer.

During the instruction time, I noticed that most of the students responded well to individual singing after they had sung together as a group. The personalities of the students varied greatly, and some students never felt entirely comfortable singing alone. In order to informally assess these students, I would pair them with another stronger singer so that they would not feel as self-conscious. The result was both students singing, and then I was able to informally assess both students at once. While this did not occur during the SVDM, this

strategy seemed to fit the needs of the students and their development well during the instruction time.

While we were able to sing a lot during rehearsals, I felt rushed to get everything in on some days. I wanted to include some listening activities to vary their experience and to give them an aural experience with the music. However, I believe that more time would have allowed me to give more focused, specific feedback to all of the students.

PERSONAL IMPRESSIONS

Because the participants were primarily members from my church's children's choir, I have seen the participants and heard them sing multiple times since the camp took place. Though I may be biased, I do believe that they sounded better this Christmas Eve Mass than they did last year. Based on informal discussions with the children, they seemed to really enjoy the pieces that we sang and the activities that we did during the time at the camp. It may be that they continued to use the strategies from the camp when they continued to sing. These strategies may have helped them over a longer period of time. The fact that they sang better on text at the end of the summer supports this hypothesis.

RECOMMENDATIONS

Some recommendations for future research and practice seem appropriate based on the results of this study and my experiences in working with the children. One possible question for further research would be to ask the students how much they sang over the period of time when there was no formal instruction. I would be curious to see if their personal feelings about singing and their singing habits had a correlation to the improvement of their singing voices.

Other further research could investigate various scheduling patterns on instruction. Some schools use block scheduling where music ensembles are offered for only half a year.

It would be interesting to see how this type of instructional pattern affects student performance in those ensembles.

In regards to the execution of the camp itself, it would have been advantageous to have another adult present during the rehearsal time. For example, one morning I needed to run back out to my car to get some materials that were needed for the day. While this occurred approximately five minutes before we officially started, students were already there and could not be left unattended. Luckily, one of the mothers was able to supervise while I went to my car, but if she had not been there I would have had a problem. I was very fortunate to have students who were very well-behaved; however, if there were any behavioral issues, having another adult present who is certified to work with children would help with a large group.

One thing that I did not consider was the reading level of some of the students. When we were singing hymns in particular, the first verse was easily taught by rote to all of the students. If we had to continue on to the next verse, the older students had no problem reading the text in the hymnal. I did not, however, consider the fact that the youngest students might not be capable of reading everything in the text. In the future, I would create a recording that had all of the verses of the hymns on it so that the younger students would be able to learn the words in a different way.

For a future study, I would provide extra time for the pretests and posttests, as well have the test in a different area if possible so that the testing process could be more time efficient. I administered the test in the sanctuary of the church, and the walk from the door where the students entered to the piano was quite far. If another area was not available, I would certainly move the piano closer to the entrance so as to not waste time in traveling. In

the future, I would also lengthen the camp to at least two weeks so that more instruction could occur. More time, hopefully, would result in more immediate singing improvement.

CONCLUSIONS

Overall, the study showed that at the end of the summer on average children sang better on text than they did before the choir camp. I found it interesting that the statistically significant improvement that emerged was between the second and third tests. Based on the large turnout and the enthusiasm of parents and children, I believe that I filled a need within my community, and I hope to continue this camp in coming years.

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APPENDIX A
Lesson Plans and Reflections

Day One- Lesson Plan

- Talk with parents/ get consent forms signed
- Warm-Up Physical
 - Shake Right arm, Left arm, Right leg, Left leg
 - For 8 beats, 7 beats, etc. to 1 beat each
 - Shrug shoulders up, scrunch up face, then release
 - Shoulder rolls
 - Posture
- Name song (DM, duple) to tune of “Bakerman”
 - “Come along, come along, let’s sing together. Where is ____? Here I am”
 - Introduce song
 - Practice with all students singing
 - Practice with all students singing own name
 - Sing with students singing “Here I am” on own
- Rock Game (Rock, rock how I wander)
- Hymns (289 and 286)
- Penny, Nickel, Dime (dm, triple)
- Introduce “See the Bird” (dm, duple) to prepare for recording

Day One – Reflection

Today was really about getting to know who the kids are and how well they sing. I’m not going to lie, I was nervous, and it did show a little. This was the first time that I was completely on my own running a classroom, a realization that I did not come to until right at that moment.

While overall the day went smoothly, the other problem with the day was that I had a limited amount of time with the students. This was due to talking to the parents in the beginning and the SVDM testing that took almost an hour. The lack of time made things seem a little rushed and disjointed, but the kids were great and very agreeable. I am lucky to have such a great group of kids who were so well-behaved; they even lined up on their own when I told them that we were going upstairs!

Day Two – Lesson Plan

- Wigalo
- Warm-Up Physical
 - Shake Right arm, Left arm, Right leg, Left leg
 - For 8 beats, 7 beats, etc. to 1 beat each
 - Shrug shoulders up, scrunch up face, then release
 - Shoulder rolls
 - Posture
 - Breathing
- Warm-Up Vocal
 - Minor – (A-F-D) on [u] descending
 - Major cadential melody – teaching hand signs for I (Do Mi Sol) only
- Go upstairs
- Adinu
- Halle, Halle, Halle – refrain
- BREAK
- Learn Simple Gifts melody
- Simple Gifts listening activity
- Review Hymns from yesterday (289 and 286)

Day Two – Reflection

Today was so much better than yesterday!! The flow and pacing of rehearsal was very smooth, and the students really seemed to be enjoying themselves. Wigalo was a great way to start the day because it immediately got them moving and energized. It also was a good way to reinforce names because not everyone in the group knew one another before yesterday. Some of the younger students struggled to keep up at first, though eventually they did catch on and were enjoying Wigalo as much as the older students. I was also impressed at how quickly they were learning the solfège and hand signs. They are still at the stage where they are echoing my model, which is to be expected since this is only a week long program. They also had very keen ears and were able to hear every iteration of the “Simple Gifts” melody within Aaron Copland’s *Appalachian Spring*.

Day Three – Lesson Plan

- Wigalo
- Warm-Up Physical
 - Shake Right arm, Left arm, Right leg, Left leg
 - For 8 beats, 7 beats, etc. to 1 beat each
 - Shrug shoulders up, scrunch up face, then release
 - Shoulder rolls
 - Posture
 - Breathing
- Warm-Up Vocal
- Solfège
- Major Cantorial Melody – have students sing in small groups
- Four Corners
- Church Music – “All Praise,” “Adinu”
- Break
- Free Movement activity – listen to “Dies Irae” from Verdi’s *Requiem*
- Listen to *La Moldau* by Smetana – have students get into groups and create story from listening to this movement
 - Give 5 minutes for them to discuss
- Have students present stories to class

Day Three – Reflection

Everything ran very well and smoothly today! I focused a lot on repeating phrases in small groups so as to hear the individual students better. Some of the students who were barely singing on the first day have gained some confidence; their singing voices are still on the verge of chanting but they at least are willing to try more things, which is a step in the right direction (especially after 2-3 days!) A lot of students are incorporating the good singing habits that I am teaching them, and this is improving their intonation tremendously.

I was so amazed by the reactions the students gave to the listening exercise! I did not tell the students what the story of the tone poem was before we listened; I wanted them to create their own image for themselves. One group described a butterfly flying through the woods who then met another butterfly. They then continued to flutter through the woods and came across a group dancing in the woods (the folk wedding section), and

finally continued to fly into an open field in the blazing sunlight. Another group described the water rushing through the woods. I was so impressed by their imaginations, but also at how well their descriptions matched up with the actual intentions of the tone poem.

Day Four – Lesson Plan

- Physical warm-up
 - Shake 1-8, 1-7, etc. with right arm, left arm etc.
- “Good morning, good morning! And what do you say? Today’s going to be a ___ day” activity for rhythm
- Wigalo
- Talk about posture, breathing exercises (inner tube, blowing on a piece of paper)
- Minor Cadential Melody and solfège – use for vocal warm-up
- Penny, Nickel, Dime game
- Adinu
- Responsorial Psalm
- Break
- Listening activity – Eroica symphony (motives)
- South African Music – Listen to SiyaHumba – learn melody

Day Four – Reflection

Those pre-singers are still slowly but surely improving, which was evident in the Penny, Nickel, Dime game. Unfortunately, the one boy got overwhelmed by all of the movement in the “good morning” exercise, particularly when he could not find someone to shake hands with during the faster part of the game. It made me realize how I need to be more attentive to students who are more sensitive than others. If I had thought about that earlier, I may have been able to be near him to be his partner if he could not find someone fast enough. Though he was upset, he did recover very quickly; that was definitely a learning experience for me.

Some of the older students have picked up the solfège very quickly and are capable of singing the cadential melody on their own with the hand signs. Some of the younger students are not at that level yet, but they are very quick to respond and most are always singing in tune!

Day Five – Lesson Plan

- Physical warm-up
 - Shake 1-8, 1-7, etc. with right arm, left arm etc.
- Wigalo
- Talk about posture, breathing exercises (inner tube, blowing on a piece of paper)
- Minor Cadential Melody and solfège – use for vocal warm-up
- Major Cadential Melody and solfège – continue vocal warm-up
- Review songs for Sunday Mass
- Work with instruments for SiyaHumba
- Collect data while students have a pizza party (parents are there to supervise)

Day Five – Reflection

The students are overall are prepared for the Mass on Sunday, and they seem excited about it! There were a few pitch problems with Adinu, but after some review it came together well. The students LOVE SiyaHumba; they kept asking to sing it. Today was a little truncated because of the data collection, but overall it was a successful day.

APPENDIX B
Singing Voice Development Measure

Singing Voice Development Measure

- 1 **"Pre-singer"** does not sing but chants the song text.
- 1.5 **"Inconsistent Speaking Range Singer"** sometimes chants, sometimes sustains tones and exhibits some sensitivity to pitch but remains in the speaking voice range (usually A2 to C3).
- 2 **"Speaking Range Singer"** sustains tones and exhibits some sensitivity to pitch but remains in the speaking voice range (usually A2 to C3).
- 2.5 **"Inconsistent Limited Range Singer"** wavers between speaking and singing voice and uses a limited range when in singing voice (usually up to F3).
- 3 **"Limited Range Singer"** exhibits consistent use of limited singing range (usually D3 to F3).
- 3.5 **"Inconsistent Initial Range Singer"** sometimes only exhibits use of limited singing range, but other times exhibits use of initial singing range (usually D3 to A3).
- 4 **"Initial Range Singer"** exhibits consistent use of initial singing range (usually D3 to A3).
- 4.5 **"Inconsistent Singer"** sometimes only exhibits use of initial singing range, but other times exhibits use of extended singing range (sings beyond the register lift: B3-flat and above).
- 5 **"Singer"** exhibits use of consistent extended singing range (sings beyond the register lift: B3-flat and above).

See the bird, in the tree; see it fly, o ver me.

Look up now, in the sky; there it goes, fly ing by.

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