1950

Results of known sustained-tone devices vs. known different-pitched-tone devices in improving pitch of "uncertain singers" in grades one and two

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COLLEGE OF MUSIC

Thesis

RESULTS OF KNOWN SUSTAINED-TONE DEVICES VS. KNOWN DIFFERENT-PITCHED-TONE DEVICES IN IMPROVING PITCH OF "UNCERTAIN SINGERS" IN GRADES ONE & TWO

by

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CHAPTER I

INTRODUCTION

Nature and Scope of the Problem

The most difficult problem of kindergarten and first grade music is to teach each individual child to "carry the tune", i.e. to sing musical intervals, using a light, pleasing, and true-to-pitch tone. 1/ A great number of children, when they first come into the formal classroom, either have had no singing experience of any kind, or have not learned to sing properly. These children, when asked by the teacher to sing in tune, will drone on a low pitch, or on a constant high pitch. However, many do enjoy their singing periods, completely unaware of their untuned voices. How much more pleasure these children could derive when taught to manipulate their voices correctly, becoming conscious of different tones, and singing in tune with the teacher and the class!

Of the many types of devices suggested for such children by men and women known and respected in the field of music education,

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1/ Gerhkens, Karl W. - Music in the Grade Schools - 1934 - C. C. Birchard and Co. - Boston - Page 32

two were chosen for the purposes of this experiment -- "sustained-tone" devices, and "different-pitched-tone" devices. These devices have been typed according to the nature of each, and the tones used in them.

The children who were used in this study were divided into two groups before the experiment was undertaken, and remained in their respective groups until the completion of the study.

The primary objective of this experiment was to attempt to find whether one type of device improved the pitch of "untuned" children in less time than the other.

Definition of Terms

"Uncertain Singers": Children or adults more commonly and incorrectly called "monotones".

According to Dykema and Cundiff 1/, so-called "monotones" are unable to sing or "carry" a tune correctly, because of various reasons, physical trouble being the least common or probable. Some have not learned to sing high, while others have difficulty singing low. Some

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1/ Dykema, Peter W. and Cundiff, Hannah M. - New School Music Handbook - 1939 - C. C. Birchard and Co. - Boston - Page 108

lack a sense of tone direction, while some can tell differences in the pitch of others, but not in themselves.

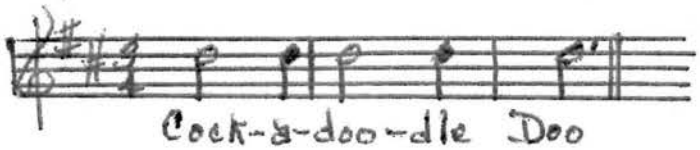
According to Gehrkens 1/,

> ".....Such children are often called "monotones" even after they learn to move their voices up and down somewhat in attempting to follow the teacher's voice. But because of the disgrace that has come to be attached to the term "monotone", many teachers refrain from using the word, calling those children who have learned to carry the tune 'singers', and those who have not, 'non-singers'."

To soften the term even more, the writer refers to such children as "uncertain singers".

"Sustained-Tone Devices": Those devices which employ only one pitch in each device, with different rhythmic patterns. Each device of this type has a sustained tone first, and then, in many instances, a repeat of this tone in various tone lengths.

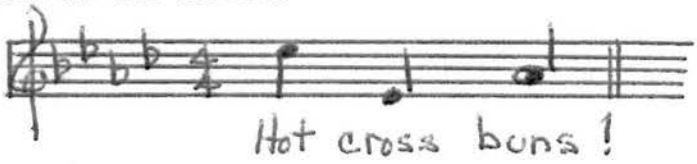
Example:



1/ Gehrkens, Karl W. - Op. cit. - Page 32

"Different-Pitched-Tone Devices": Those devices which have an interval between each tone of the device.

Example:



Justification of the Study

"Singing is the most important music activity in the grades, and so every child should learn to sing." 1/ With this in mind, the writer took it upon herself to give individual attention to those children who for one reason or another did not sing correctly with the class.

It is important to catch the "untuned" voice early, for if a child is left alone and allowed to sing incorrectly, it is harder for him to acquire correct pitch production as he grows older. The earliest school age at which a trained music teacher can aid the child is in the first contact each has with the other, i.e. usually the first grade of the public school. Here the teacher can also reach those children who have had previous kindergarten experience. The latter will, by the first grade, have had some experience with class singing, and so

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1/ Miller, Edith F. - "Music in the Grades" - American Childhood - March, 1948 - Page 17

will not be as shy as those children who come into the school system for the first time. Since shyness in the first school experience is one of the reasons that many children do not sing as well as they might, it is almost wholly eliminated in those children who have had class contacts for one year. Again, children in the second grade are still young enough to have enough vocal flexibility so that the writer thought it wise to include them also in this experiment, even though the number of children in this grade was considerably smaller than that of the first grade, as would be expected for the above reasons.

The writer gave individual attention to these children outside of the classroom so that there should be no disturbing influences common in a classroom. The individual child had only to concentrate on the one or two devices which the writer presented to him at that one time, and also did not have the feeling that other children were watching him in his failure.

> "Every child should have opportunities to sing alone to train his ear to recognize differences in pitch and to learn to match tones accurately. If children are allowed to drone along through a song, many of them may never overcome the bad effects of this practice." 1/

1/ Fields, Frances F. and Pattison, Nelle - "Music in the First Grade" - The Grade Teacher - October, 1944 - Page 30

> "Children have to be led to listen, and to try, alone, again and again to do the various things that will help them to find control of their voices. The individual child can hear himself better when singing alone, and so progress is quicker.....The monotone should be separated from the class....and placed near good singers to hear the correct intonation....ANYONE THAT CAN SPEAK CAN SING." 1/

Design of the Study

This study can be divided into the following steps, each of which will be described in a later chapter:

a. Testing for "uncertain singers" in four first and three second grades in one elementary school building during the sixth week of the school year.

b. Selection from published material written by well-known teachers in the field of music education of devices to improve the pitch of "uncertain singers".

c. Division of these devices into two types -- "sustained-tone" devices, and "different-pitched-tone" devices. Further study to eliminate those which are duplicates, and those which do not appeal to the child from the standpoint of words used.

1/ Dykema and Cundiff - Op. cit. - Page 108

d. Impartial division of the "uncertain singers" into two groups -- "sustained-tone" group or "different-pitched-tone" group.

e. Individual work with these "uncertain singers" once a week during the time the school is in session, starting December 12, 1949, and ending March 13, 1950, for a period of two and a half to three minutes per child.

f. Explanation of each device and methods of administration.

g. An interpretation of results,and suggestions for further research.

CHAPTER II

REVIEW OF PREVIOUS RESEARCH

The problem of the pitch-deficient child is one which has worried educators for many years. Some have tried to find out if improvement could be made, and others have tried various ways and means of improving the situation.

In 1945, Ruth Wyatt made an investigation into the possibility of improving pitch discrimination. 1/ She gave much attention to the individual differences of her subjects, and thus tried to develop "work methods" suited to each subject. The results showed that pitch discrimination was improved when attention was given to individual differences.

Ten years earlier, Robert Seashore had also made a study into the possibility of improving pitch discrimination. 2/ He used the theory of individual differences, and also found considerable improvement after training, but felt that he could not give definite conclusions until more work had been done with that particular study.

1/ Wyatt, Ruth F. - "Improvability of Pitch Discrimination" - Psychological Monographs - 1945 - Vol. LVIII, No. 2

2/ Seashore, Robert H. - "Improvability of Pitch Discrimination" - Psychology Bulletin - 1935 - Pages 532-546

In 1932, Wolner took seven of the worst pitch-deficient children in the Detroit elementary schools, and secured results through intensive training on "thinking" of tones, studying pitch, a piano, and a series of Whipple forks. 1/ We concluded that probably the reason children failed to learn to discriminate pitch in school was some faulty method of teaching, and not physical auditory deficiencies.

In addition to these actual case studies, some suggestions for help in other and additional studies have been proposed by people known in this field, and are herein given:

Montéclair, a famous writer of methods in the eighteenth century, gave the following as primary considerations in training the voice:

> "(1) Not to force the voice in an attempt to make it ascend higher or descend lower than its natural disposition permits.
> (2) Not to do violence to the voice in an attempt to make it louder and bigger.
> (3) To sing always in an even voice, never passing from the natural voice to a falsetto, or head voice, unless absolutely necessary." 2/

1/ Wolner, Manuel - An Experiment in Individual Training of "Pitch-Deficient" Children - 1932 - Unpublished Master's Thesis - Wayne University, Detroit

2/ Pincherle, Marc (Translator) - "Elementary Musical Instruction in the Eighteenth Century - An Unknown Treatise by Montéclair" - The Musical Quarterly - January, 1948 - Page 61

To further this theory, we find it said in the twentieth century that:

> "Musical intonation differs from speech intonation in two ways: (1) in music the pitch is sustained at a given level for a certain length of time, and (2) these pitch levels are arranged in a conventional series, each of which bears a fixed frequency relationship to the others. In making the transition from speech to musical intonation, the child must acquire control over these two factors." 1/

However,

> "The failure of the monotone is almost always a failure of mental grasp, and should be attacked as such. He should be led to visualize the melody by graphic methods, or to grasp pitch in terms of consonance and muscular sense by sliding the voice up or down to a pitch held by the class. A psychologically intelligent attack upon the problem of the monotone almost always yields a satisfactory solution." 2/

> "The three most potent ways of solving the problem of the non-singer are: (1) To give abundant opportunity for song singing and to make singing so attractive that all the children in the group will want to take part in this fascinating activity and do it well. (2) To stimulate the individual child who has difficulty in singing properly to think higher and to cause his voice to follow such higher

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1/ Stoddard, George D., Editor - "Measurement of Musical Development" - University of Iowa Studies in Child Welfare - Vol. VII, No. 1 - 1932 - University of Iowa City - Page 68

2/ Mursell, James L. - Principles of Musical Education - 1927 - The MacMillan Co. - New York - Page 192

'thinking'. (3) To show the non-singer how to prolong the vowel, thus making a singing tone instead of a speaking tone." 1/

"Observers have found that monotones develop as follows: first, they learn to sustain one or two upper tones, and when urged downward, immediately drop to the low pitch from which they began; second, they sing one phrase of a song in one tonality, and the second one in a different tonality. This latter stage is the despair of the teacher, but in reality the monotone is getting into what we call the 'follow' stage, a stage in which he is almost cured. This stage is best advanced by having a child sing with another child who is musically strong, and urged to listen to the other voice while they both sing, and so compare it with his own." 2/

Conclusions from a Survey of Previous Related Studies

Every child is able to learn to sing a tune in the same sense in which he is able to learn to talk, unless there is a serious physical defect. "Supervisors of music assume that no normal child is an incurable monotone; classifying him as such merely indicates his need for special treatment." 3/

1/Gehrkens, Karl W. - Op. cit. - Page 32

2/Wright, Frances - Elementary Music Education - Theory and Practice - (Revised Edition) - 1941 - Carl Fischer Inc. - New York - Page 38

3/Ibid - Page 38

Monotones are not, therefore, musical deficients, but usually are merely musically retarded because of a lack of proper or sufficient musical stimuli previous to school age. The sense of hearing functions at the age of three weeks, and from that time on intonation is merely a matter of imitation.

> "The lack of experimental studies in music education has been recognized by authorities for many years, but there has not been a significant amount of attention given to this deficiency.....Scientific study of school music teaching is a necessity if music educators are to have grounds to justify their department and their methods and procedures." 1/

And so, the writer has attempted, through this experiment with forty-six children, to find whether "sustained-tone" devices or "different-pitched-tone" devices attain a higher degree of success in improving pitch.

1/ Weigand, J.J. - "The Scientific Approach to Music Teaching" - Music Educators Journal - November-December, 1946

CHAPTER III

PRELIMINARY PROCEDURES

Method of Selecting Groups

All the children in the first and second grades at the Pearl Street School in Reading, Massachusetts, were tested by the writer the first time she entered each classroom in her role of student music supervisor. This took place at approximately the sixth week of school, when the children were a little more accustomed to school and its routines than they were at the beginning of September. All the children were first taught a rote song, and then motivated to call "Ma-ry", octave Eb, by class and individually, through imitation. Those who could not match the tones correctly were given seats in front of the class during the music period, and were called the "Chorus". Each week when the writer took over the music lesson for that day, she paid particular attention to the "Chorus" by having them sing individually the "Ma-ry" call, or others which she brought in from time to time, and in which the rest of the class could also participate in some way. Those children who, because of shyness or timidity were not successful in matching tones the first week of the formal music class, were sent back to their regular seats as soon as they learned to match tones successfully when administered by the classroom teacher or the writer.

Since this particular school is run according to the so-called "progressive" modern educational system, the children are used to being grouped according to their abilities in the various subjects, so that even with the addition of the name "Chorus", there was no stigma attached to its membership.

At no time was the "Chorus" asked not to sing with the rest of the class. The reason for seating the "Chorus" in the front of the room was so that the children in that group would get the benefit of the correct tone from the children seated behind them, and from the teacher's voice in front of them. In this way, their "untuned" voices did not bother the other children, and did not mar their correct tone and intonation.

The writer took the "Chorus" from each class on December 12, 1949, to the school auditorium for individual help, the results of which form the basis and data for this study.

Methods of Selecting and Analyzing Devices Used

Much material, both in books written about the field of music education, and music books used in the first and second grades, in addition to magazine articles, was examined thoroughly and critically for devices to improve pitch in children, particularly those in the first two grades of the public schools.

Those devices which were longer than four or five tones, and those which had a range greater than the soprano staff were automatically discarded. When about eighty devices had been gathered, and all available sources had been exhausted, they were perused again very thoroughly for duplications and vocabulary. The latter is extremely important because some of the devices were suggested in books written many years ago, when "mowing the hay" and "milking the cow" were everyday experiences real to the children of both the city and the country. On the other hand, a washing machine of today may say "swish, swish", but the words themselves cannot be sung with any correctness of tone and pitch because of the multiplicity of hard consonants. It goes without saying that words that are taught in the higher grades should not be used in devices for first and second grade children.

The sixty devices that remained were divided into the "sustained-tone" and "different-pitched-tone" groups as explained in Chapter I. Each group of devices was then arranged according to difficulty. The "sustained-tone" group began with humming into vowel sounds, before actual words were used, while the "different-pitched-tone" group of devices began with octave skips, which are easier to hear, and progressed to smaller and smaller intervals. Each device will be shown and explained in the next chapter.

CHAPTER IV

METHODS OF PROCEDURE

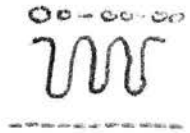
Selection of Groups

As indicated in previous chapters, those children who consistently could not match tones became members of the "Chorus" in each of the first and second grade classes in the one elementary school building. The writer was in full charge of the music program in only four of these seven classes, even though she did select the "Chorus" for all the seven classes. In her own classes, the writer constantly brought new devices to improve the pitch of the "Chorus" which the classroom teachers used daily with the help of the other children in the class. However, the other three classes had no such devices, and did not have daily help in this way. As a result, the "Chorus" in each of the classes in which the writer took charge became much smaller than the "Chorus" of the other three classes.

When the time came for the various "Choruses" to be divided into two groups for the purposes of this study, the writer obtained lists of the names of the children in each class "Chorus", and checked every other name in each class list. Those children whose names were checked were put into the "sustained-tone" group, while the others were automatically put into the "different-pitched-tone" group. As a result, there were about twenty-three children in each group.

Method of Administration and Explanation

Both groups were started with the "siren" device 1/, so that the writer could tell easily if each child could manipulate his voice or not, and to what degree. This device was necessary in the beginning since it was a familiar sound to the children, and one liked by them at this age level; also the relationship between the individual child and the writer started on this common ground, and thus the children imitated the writer willingly for every device. Another practical reason for starting with this device is that it shows whether each child has a concept of pitch direction by imitation.



"Sustained-Tone" Group: After the children had imitated the siren, even with a deviation of only an interval of a fourth, the writer asked them to sing the vowel sound OH from a hum (HM - OH) at different pitches 2/, starting from the highest pitch which they could produce successfully. Those children who had high voices were asked to sing this device on the lowest pitch which they could produce successfully. It must be understood that it sometimes took

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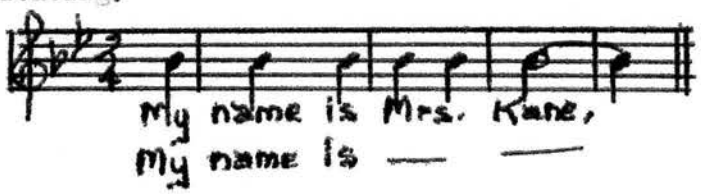
1/ American Singer, Book I - 1944 - American Book Co. - New York

2/ Dykema, Peter W. and Cundiff, Hannah M. - Op. cit.

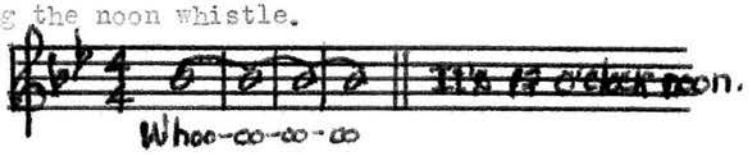
two or three weeks before the writer and the child could find a pitch that the child could imitate, but once it was found, the writer either ascended or descended stepwise with repetitions of this device. It should be noted here that at all times the child was encouraged through a spirit of play, and never made to feel that there was anything to be ashamed of in his voice.

As the child began to have more confidence in himself, his tone improved, and the matching of the tones became easier and quicker. When the child was sure of himself, and of the idea that the writer was trying to help him, he felt more at ease, and thus it was felt that words could be introduced at this point. Each child was shown the pile of cards on which were kept individual records of each child's progress, and was told that the writer could not remember the names of all those children, so that it was time that each introduced himself to the other. The writer first sang "My name is Mrs. Kane" (pitch Bb), and the child answered "My name is ----" 1/. The pitch of Bb was found to be the middle pitch which the children with either low or high voices had trouble in imitating.



1/ Hubbard, George E. - Music Teaching in the Elementary Grades - 1934 - American Book Co. - New York

The "Factory Whistle" device 1/ came next. Here the children sang the following with the added words "It's twelve o'clock noon", to give the extra vowel at the end, and to give the child the feeling of actually being the noon whistle.



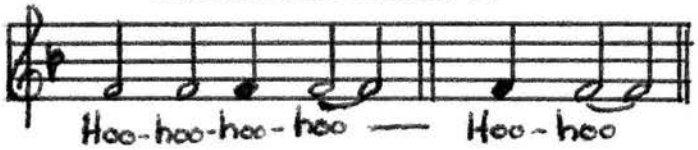
The writer helped the child at this point by running her finger over the top of the music rack in a straight line to show the child how this device "looked" when sung correctly. When the child sang this device, the writer continued to "picture" the sound by running her finger either in a crooked line or on a straight line on a lower level, according to how the child's voice sounded in the imitation. This helped many children, and usually brought them up to pitch, or made their ears sharper in that they could tell whether they were on the correct pitch without the "picture" having to be used. Because of its success for this particular "Factory Whistle" device, this "picture" device was used whenever it seemed necessary.

1/ Our First Music - 1941 - C. C. Birchard and Co. - Boston

These first few devices were the hardest for the children to conquer, but once a child had mastered them, he could successfully do the following devices one after another almost without more than one or two trials; the only things that the writer said to the child were introductions to each device in a language the child could understand, telling him the name of each device, and putting him in the mood to "impersonate" the person, animal or thing which did the calling in the device (example: Auto Horn, Train Whistle or Pigeon). However, as would be expected, not all of the children learned to imitate immediately, so that the writer used the "Three Bears" device (low, medium, and high pitched) 1/ and the mouse's squeak 2/ device to help the laggers.

The following is a list of the additional devices used:

Owl Calls: Big Owl 3/

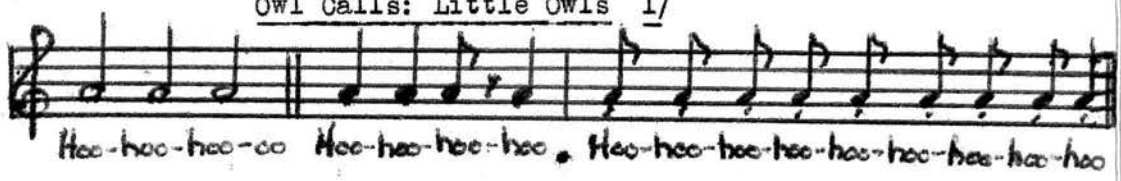


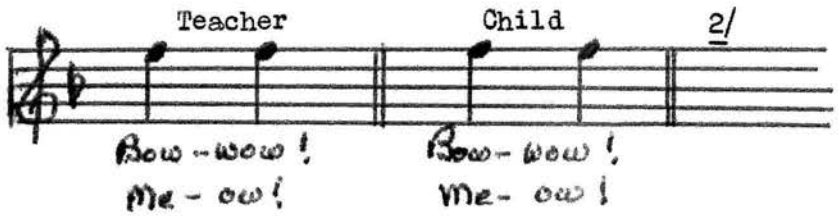
1/ New Music Horizons - Book I - 1949 - Silver-Burdett Co. - New York

2/ Dykema, Peter W. and Cundiff, Hannah M. - Op. cit.

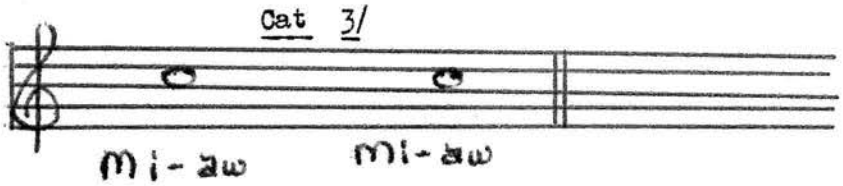
3/ Our First Music - Op. cit.

Owl Calls: Little Owls 1/

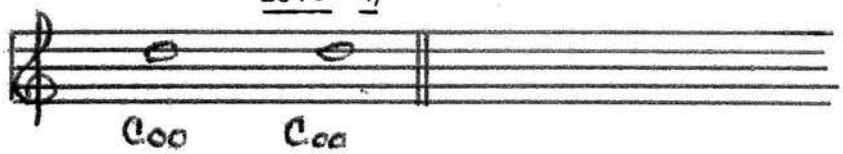


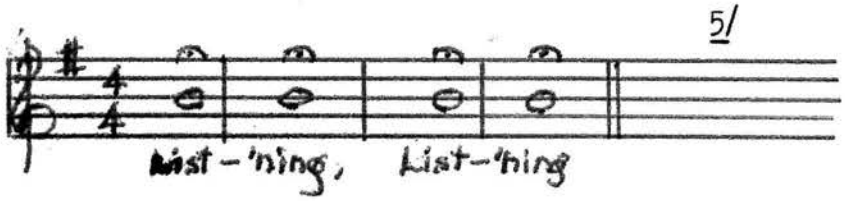


Cat 3/



Dove 4/





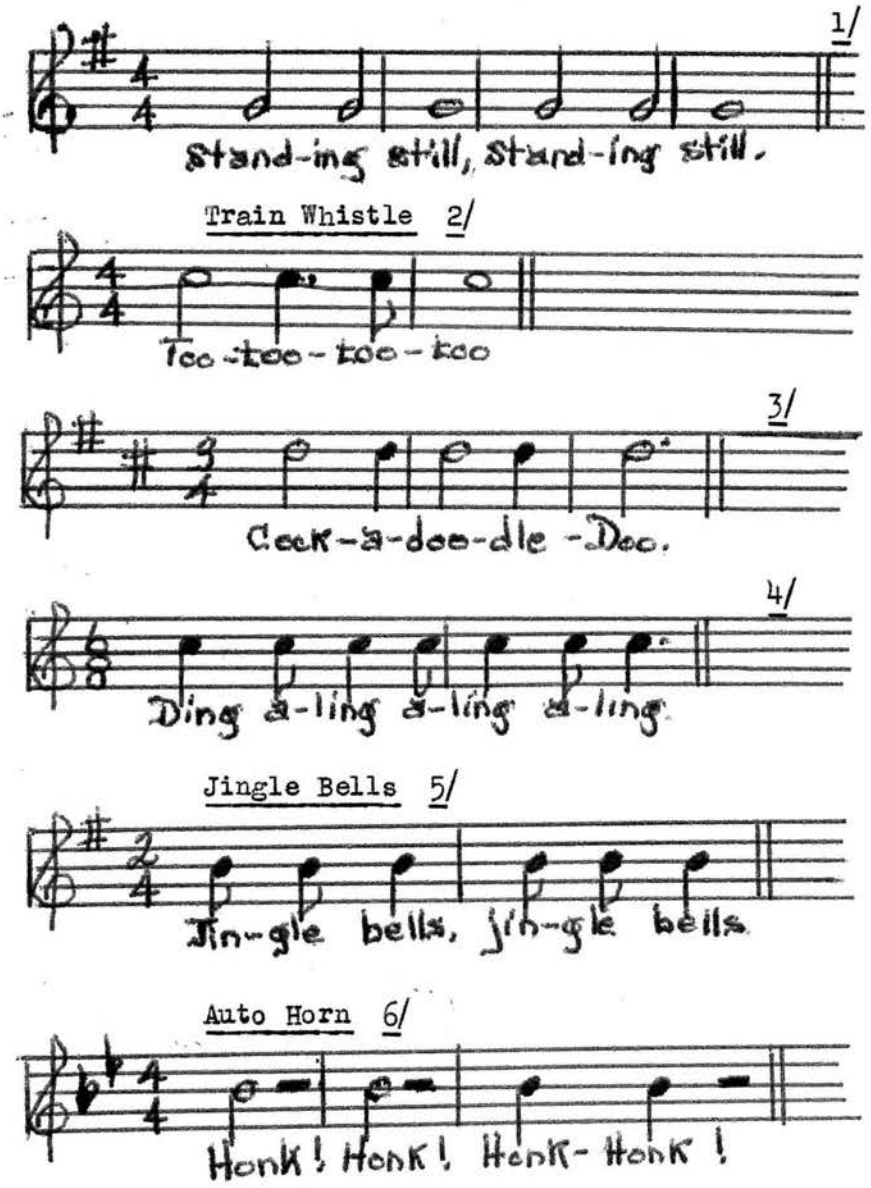
1/ Ibid

2/ St. Louis Public School Journal - November, 1945

3/ Our First Music - Op. cit.

4/ Ibid

5/ Hubbard, George E. - Op. cit.



1/ Ibid

2/ Our First Music - Op.cit.

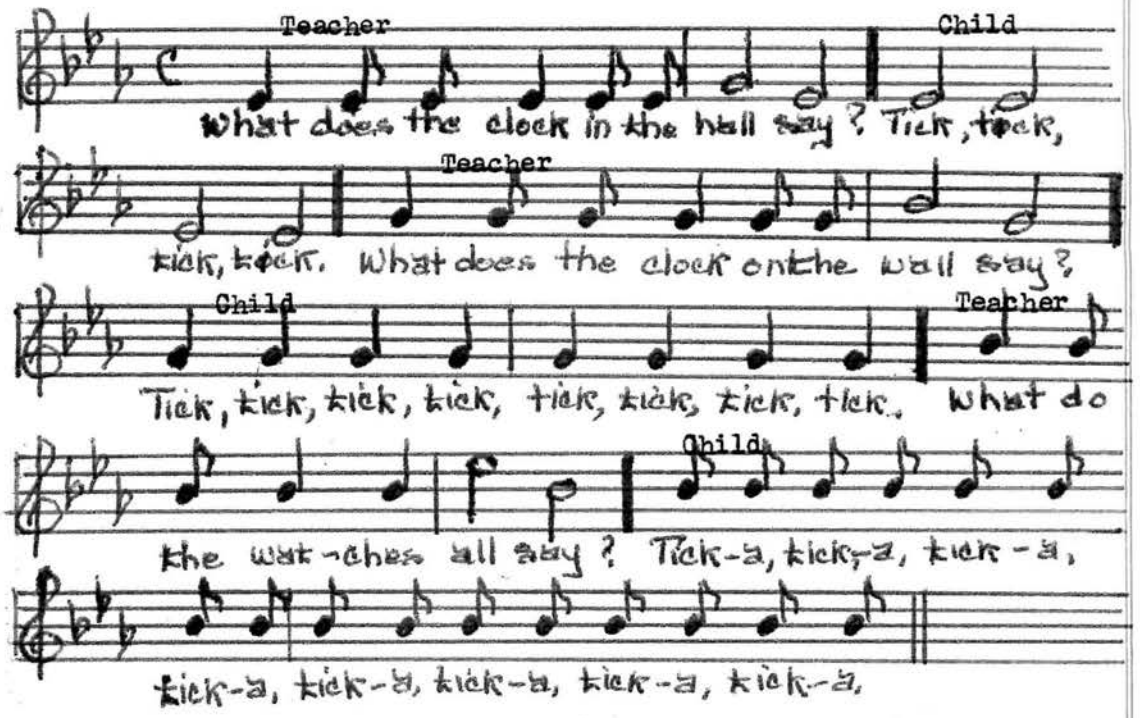
3/ Music in the Public Schools of North Carolina (Course of Study) - 1942

4/ Ibid

5/ Our First Music - Op. cit.

6/ Ibid

Clock and Watch 1/



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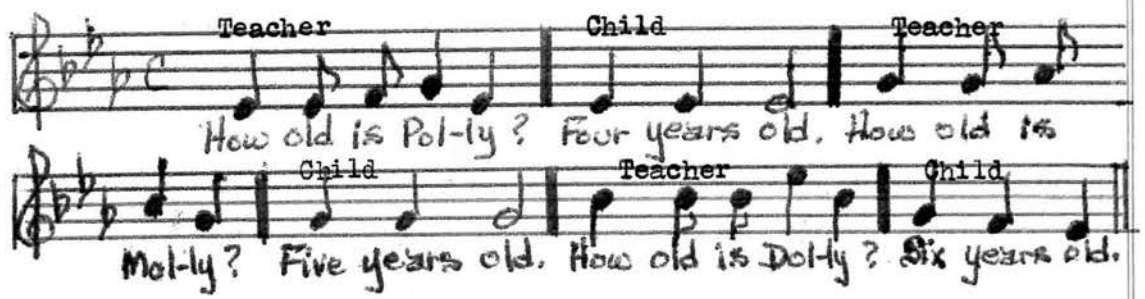
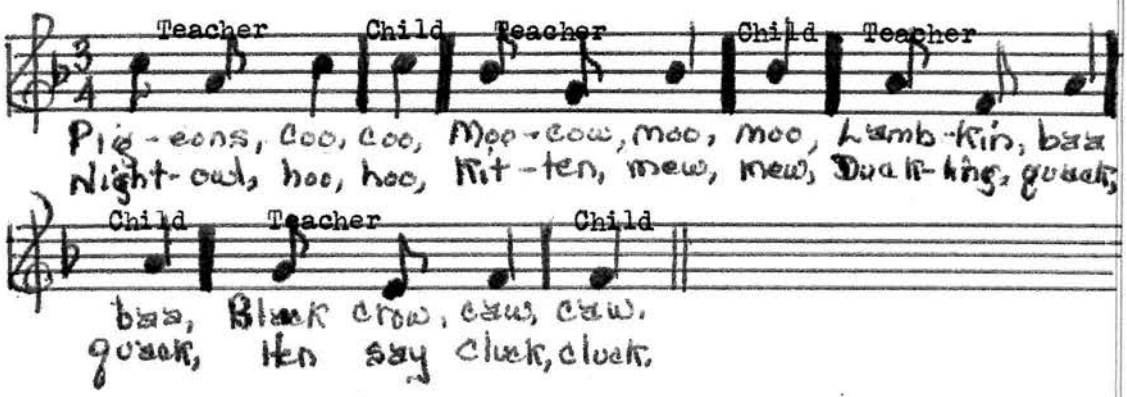


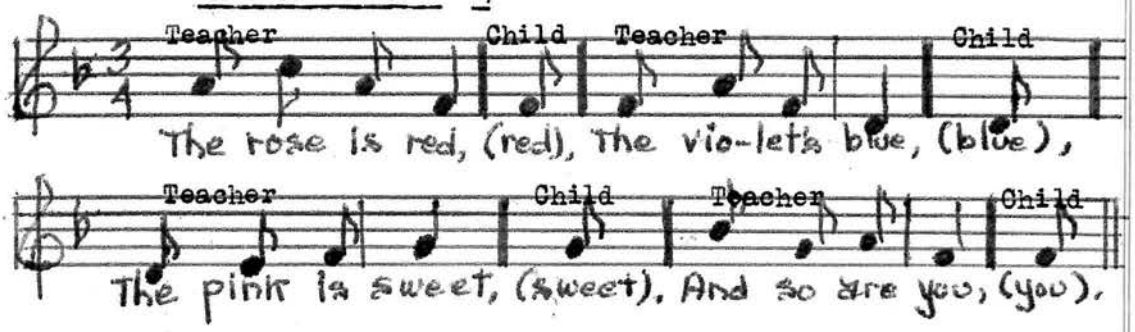
1/ Smith, Eleanor - Song Devices and Jingles - 1920 - Lothrop, Lee and Shepard Co. - Boston

2/ Ibid

What Little Animals Say 1/



The Rose is Red 2/



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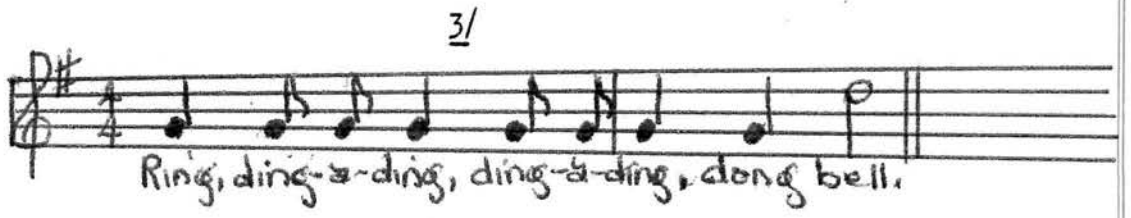

1/ Ibid

2/ Ibid

3/ Our First Music - 1941 - C. C. Birchard and Co. - Boston

"Different-Pitched-Tone" Group: After all the children had sung a fair imitation of the siren, the question was whether they could hear differences or intervals in tones, so that, especially in this group, they could produce them correctly once they had heard the writer sing them. To check this, the writer sang the word "Ma-ry", octave Eb, and each child told her which part of the word was higher than the other. To double-check, the writer then sang "Mary had a (pitch Bb) little lamb (pitch first line Eb)", and the children told her which words were lower. This latter sentence was used thus because there was a smaller interval used, and the music jumped suddenly from the Bb to the Eb, so that the child had to have an ear for the differences in the pitch to catch the jump.

To find out whether the child had a low or a high voice, the vowel OO-OO first in an octave jump, and then in smaller and smaller intervals was sung. Few could match the tones, but they tried hard, so that a fairly good idea of each child's placement of the voice was given.

The first actual device was that of an octave jump, since this interval is easier to hear in the beginning. The children were still not completely at home with the writer as yet, so that she chose this particular device because of the repeated first note (for the children to get their bearings better) and because of the familiarity of the words.

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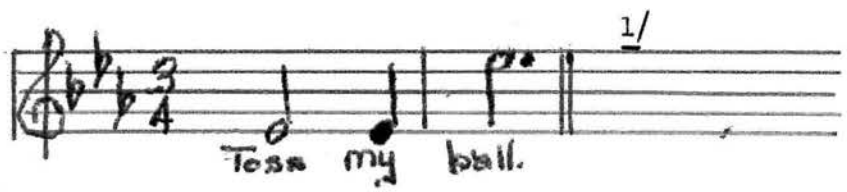
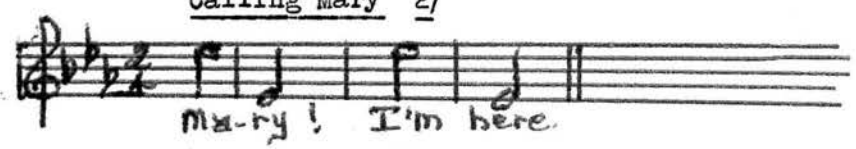


1/

The children were asked to raise their arms with their voices when singing the device, but, surprisingly, this did not improve the imitation in a single child. Since this experiment took place in the auditorium of the school, the piano at which the writer sat for these sessions was in the front of the stage. The children could see the valance of the stage curtain easily, and the writer asked them to "throw the ball" to that valance from where they were standing. This helped some children, but not others. The most successful device was when the writer asked each child to toss his ball to her, and then she "tossed" it back to him, repeating the device.

This next device was one which gave the most trouble to the children, for most of them had low voices, and could not imitate the first tone, while those who had high voices could not make the octave jump downward correctly.

Calling Mary 2/

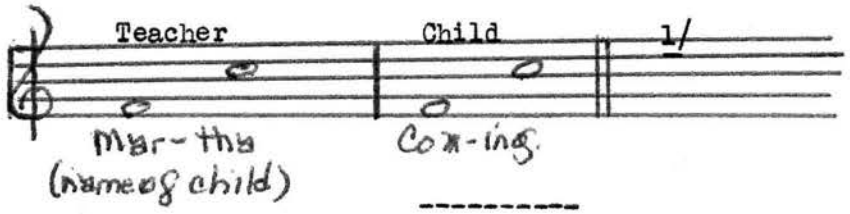


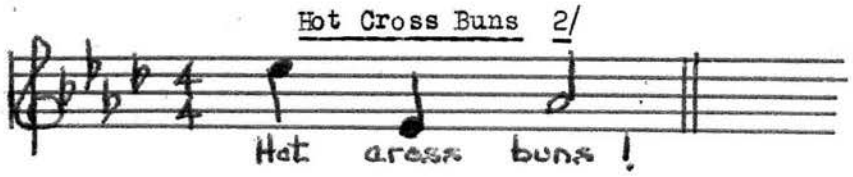
1/ Music in the Public Schools of North Carolina - Op. cit.

2/ Our First Music - Op. cit.

The writer, then, used the device as it was written for those children who had the high voices, and after many trials did successfully have the children sing the correct interval. However, the writer took the liberty to reverse the device for those children with the low voices, and had them start with the low Eb. This way proved successful.

The children loved this device, but had a hard time imitating the interval of a fifth; they could not jump the full fifth, only a fourth, or sometimes up to a sixth. However, once they did master this device, it was found to be the turning point, and the remaining devices were imitated correctly with little or no trouble.





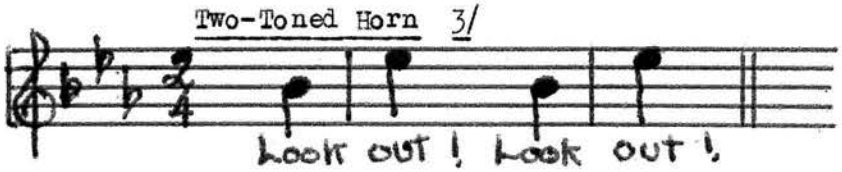
1/ Curriculum Development in the Elementary Schools of New Mexico - 1947 - Sante Fe Publishing Co. - Bulletin #2 (Revised)

2/ Our First Music - Op. cit.

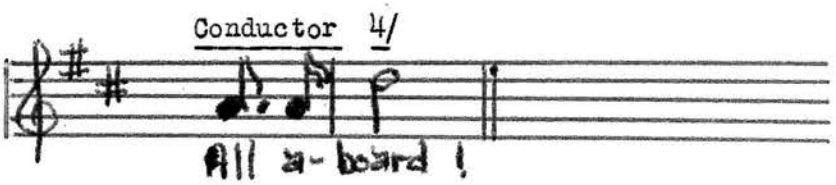
Hello 1/

2/

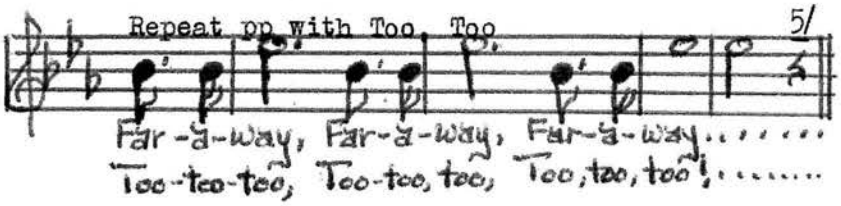
Two-Toned Horn 3/



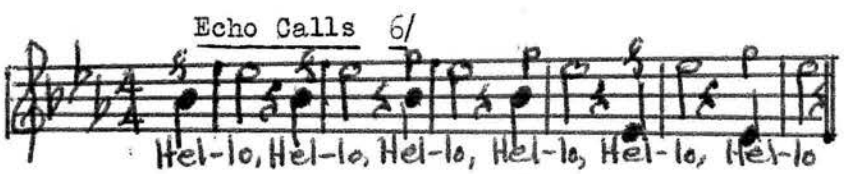
Conductor 4/



Repeat pp with Too, Too 5/



Echo Calls 6/



1/ Ibid

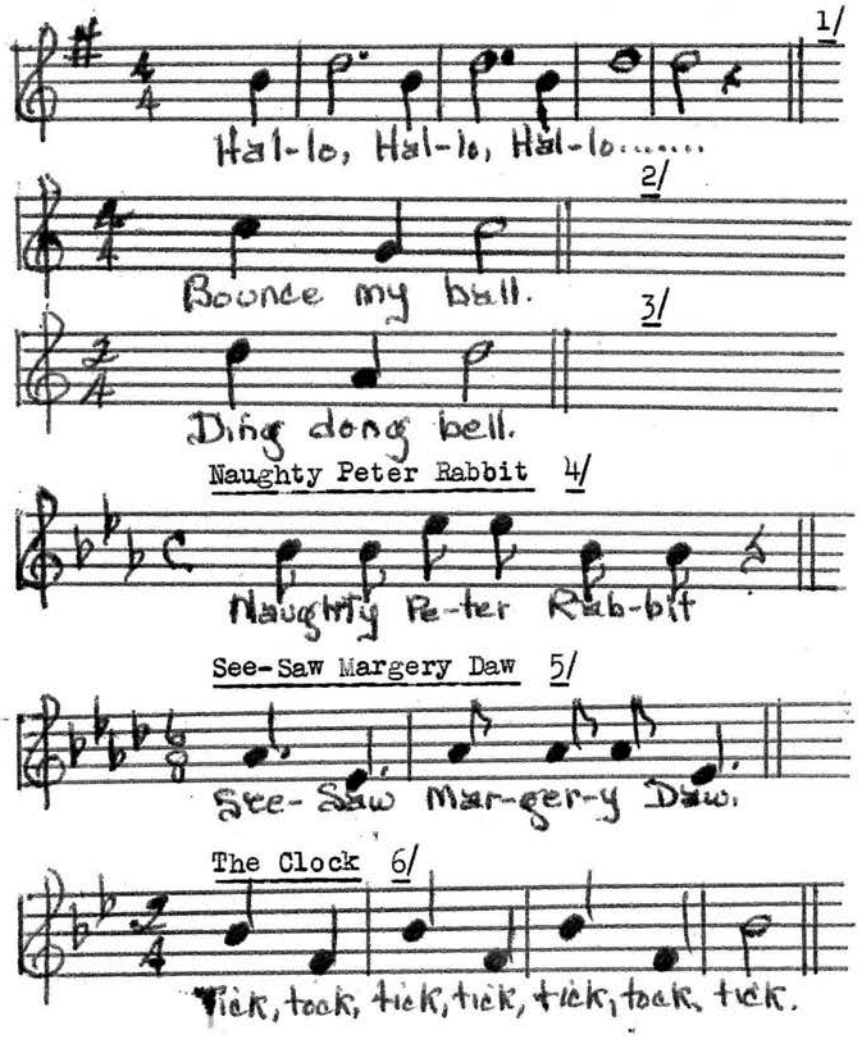
2/ Music in the Public Schools of North Carolina - Op. cit.

3/ Our First Music - Op. cit.

4/ Ibid

5/ Hubbard, George E. - Op. cit.

6/ Our First Music - Op. cit.



1/ Hubbard, George E. - Op. cit.

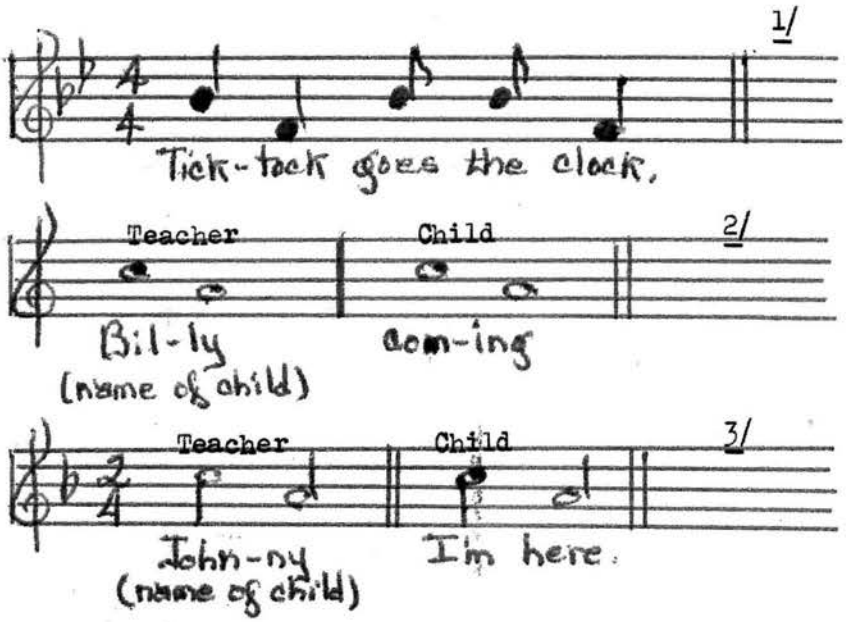
2/ Music in the Public Schools of North Carolina - Op. cit.

3/ Thorne, Alice - Music for Young Children - 1929 - Chas. Scribner's Sons - Boston

4/ Our First Music - Op.c it.

5/ Ibid

6/ Ibid



It might be noted here that there were about thirty more devices for this group that the writer had prepared. However, since there were only twenty devices used in the "sustained-tone" group, it was felt that the first twenty of the "different-pitched-tone" group should be used in the study. When the child had successfully completed these twenty, he was asked to sing a portion of a known rote song from imitation, and the results were accurate in every case, so that the writer felt that these twenty devices were evidently sufficient for this group.

1/ Music in the Public Schools of North Carolina - Op. cit.

2/ Curriculum Development in the Elementary Schools of New Mexico-Op. cit.

3/ St. Louis Public School Journal - Op. cit.

CHAPTER V

RESULTS OF THE STUDY

Interpretation of Results

Of the forty-six children who began this experiment, twenty-two had successfully gone through all the devices of their respective groups after ten meetings. Two of these twenty-two had finished after only five weeks. It is interesting to note that these children were in the "sustained-tone" group. The other twenty were divided so that elemen children completed the "sustained-tone" devices, and nine the "Different-pitched-tone" devices.

There were some children, who, with a little more help, could have completed the devices successfully; these numbered four in the "sustained-tone" group and five in the "different-pitched-tone" group.

Many children had a hard time matching any of the devices. They were able to get the intervals correctly, but not in the same key, i.e. the correct interval was always sung at least a whole tone lower than the example, with each tone the same amount of difference away from the original. Of these, it was felt that at least five children could not have been helped even if the experiment had continued until the end of the school year; perhaps another year or two of training might prove worthwhile.

Two of the entire group of children showed no progress in that they did not change the tone quality or range of their voices when speaking in the classroom, or even when they got excited. These children should definitely be given more training, and should not be allowed to continue with this deficiency.

The following table shows the exact division of the results of each type of device:

TABLE I

FREQUENCY AND DISTRIBUTION OF RESULTS

	Completed 100% Devices	Completed 55% Devices	Unsuccessful in Pitch Placement	Showed no Progress
"Sustained-Tone"	13	4	4	1
"Different-Pitched-Tone"	9	5	9	1
Totals	22	9	13	2

The following table shows the exact percentage of pupils successfully completing the "Sustained-Tone" devices:

TABLE II

PERCENTAGE OF PUPIL SUCCESS WITH "SUSTAINED-TONED" DEVICES

Devices	Percentage	Devices	Percentage
1. Hm-oh	100%	11. Train Whistle	59%
2. My name is -----.	100%	12. Rooster	55%
3. Factory Whistle	86%	13. Telephone Bell	45%
4. Big Owl	86%	14. Jingle Bells	45%
5. Little Owl	86%	15. Auto Horn	45%
6. Bow-wow	77%	16. Clock and Watch	45%
7. Mi-aw	77%	17. Ages	45%
8. Coo Coo	68%	18. What Little Animals Say	45%
9. List'ning	64%	19. The Rose is Red	45%
10. Standing Still	64%	20. Ring, ding-ading	45%

The following table shows the exact percentage of pupils successfully completing the "Different-Pitched-Tone" devices:

TABLE III

PERCENTAGE OF PUPIL SUCCESS WITH "DIFFERENT-PICHED-TONE" DEVICES

Devices	Percentage	Devices	Percentage
1. Oo-oo	100%	11. Echo Calls	38%
2. Toss my ball	92%	12. Hallo	38%
3. Calling Mary	63%	13. Bounce my ball	38%
4. Martha - Coming	50%	14. Ding dong bell	38%
5. Hot Cross Buns	46%	15. Naughty Peter Rabbit	38%
6. Hello	46%	16. See-saw	33%
7. Apples	38%	17. The Clock	33%
8. Two-Toned Horn	38%	18. Tick-Tock	33%
9. Conductor	38%	19. Billy	33%
10. Far-a-way	38%	20. Johnny	33%

Significance and Implications of Results

This experiment was begun on December 12, 1949, and was carried through March 13, 1950, with a group of forty-six children. Because of school vacations and class scheduling, the total number of meetings of these children and the writer was only ten. During this comparatively short length of time, twenty-two children, or 48% of the group, completed the entire series of devices successfully in that they were able to return to their respective classrooms and sing correctly with their respective groups. Of these twenty-two children, thirteen, or 59% , were in the "sustained-tone" group. Nine children, or 41%, were in the "different-pitched-tone" group.

There were nine children, or 20% of the group, who, at the end of the experiment had completed only 50% of the devices. Of this group, four, or 44%, were in the "sustained-tone" group, and five, or 56%, were in the "different-pitched-tone" group.

There were thirteen children, or 28% of the group, who, at the end of the experiment, were still very unsuccessful in pitch placement. Of these, four, or 31%, were in the "sustained-tone" group, and nine, or 69%, were in the "different-pitched-tone" group.

There were two children of the entire group who showed no progress, having no success whatever with any of the devices. Of these, there

was one in each of the two groups.

Upon examination of Tables II and III, we find that 50% of the children in the "different-pitched-tone" group completed only four devices, while the same percentage of children in the "sustained-tone"group completed at least twelve devices. It is possible that the "sustained-tone" devices were easier for the children to imitate, and the "different-pitched-tone" devices were more difficult for children who are classed as "uncertain singers".

In the short space of only ten sessions, the above-noted results occured. It is realized that this length of time was probably not sufficient to achieve the best results, since the differences in the amount of success in the two groups was not great enough to draw valid conclusions.

It should be noted that after the experiment as such was concluded, the writer continued working with those children who had not sufficiently improved in their pitch placement. After five additional sessions, all the children in both groups, except for the two who were previously mentioned as showing no progress, were able to successfully imitate one phrase of a known rote song. They were not able to correctly sing the entire song, but could stay on pitch for one phrase.

Through these additional five sessions, all the children in the "sustained-tone" group were able to complete their series of devices. However, the children in the "different-pitched-tone" group, even with this additional help, could not successfully imitate the devices in the order in which they were given in the experiment. Because of this, the order of the devices of this group was changed, - but this did not seem to aid materially.

With these latter results in mind, it would be interesting if this experiment could be repeated over a longer period of time, changing the order of the "different-pitched-tone" devices to suit the needs of each individual child. It is possible that from an experiment of that type, more valid conclusions might be drawn.

It should be noted that although the results as they occured during the ten-week session were not significant enough to warrant definite conclusions showing the complete advantage of one type of device over the other, it must be kept in mind, however, that the results, such as they are, do tend to show some definite implications. It is therefore possible that a longer period of time might have shown more positive results.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

Summary and Conclusions

The purpose of this study was to conduct an experiment using two types of devices designed to improve the pitch placement of "uncertain singers", and to attempt to find which of the two types was of more value. To achieve this result, eighty devices were selected, and after careful analysis and rejection of some, twenty devices which made use of sustained tones, and twenty devices which made use of different tones were selected.

During the sixth week of the school year, "uncertain singers" from four first grades and three second grades were selected and divided impartially into two groups. These children were worked with individually once a week from December 12, 1949, to March 13, 1950, in an effort to improve their sense of pitch.

Of the forty-six original "uncertain singers", twenty-two successfully completed the program and returned to their classrooms; nine completed approximately 55% of the work; thirteen were still very unsuccessful in pitch placement; and two showed no progress.

Since this experiment was carried on over a comparatively short period of time, and since there was such a small difference in the number of children completing both groups of devices, it is felt that no very definite conclusions can be drawn. However, if the order of the "different-pitched-tone" devices, which seemed to be more difficult, was changed to meet the needs of each individual child, the results might be more conclusive.

Suggestions for Further Research

1. A similar type of experiment should be carried on over a longer period of time to give more definitive results of the advantages of using one type of device over another.

2. An experiment of the same nature might be carried on daily by the classroom teacher, since contact in all types of school activities might lead to a better relationship between the individuals concerned.

3. A correlation study between intelligence and success in pitch placement might be of interest.

4. A correlation study between actual physical well-being of the child and correct pitch placement might be of interest.

5. A correlation study between home environment and correct pitch placement might be of interest.

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ABSTRACT

Problem

The purpose of this study is to try to find out through an experiment if one type of device to improve pitch in children will work more effectively in less time than another. The two types of devices used in this experiment are "sustained-tone" and "different-pitched-tone" devices.

Scope and Limitations of the Study

The children used in this experiment were "uncertain singers" of grades one and two in one elementary school building in Reading, Massachusetts.

Procedures

Devices to improve pitch of "uncertain singers" were carefully selected from published material written by well-known teachers in the field of music education. These devices were divided into two types -- "sustained-tone" devices and "different-pitched-tone" devices. They were further studied to extract any duplicates, and any which would not appeal to the children because of the words involved. The "uncertain singers" were divided impartially into two groups -- a "sustained-tone" group and a "different-pitched-tone" group. Each

child was helped individually once a week during the school session for approximately three minutes per child. This experiment began on December 12, 1949, and ended on March 13, 1950, for a total of ten sessions.

Major Findings and Conclusions

1. Of the forty-six children used in the experiment, 48% had improved their pitch in singing enough to return to their classrooms and sing with the class correctly.

2. Of the above group, 59% had been in the "sustained-tone" group.

3. There were nine children, or 20% of the total number, who, at the end of the ten sessions, had completed only 50% of the devices of their respective groups.

4. There were thirteen children, or 28% of the group, who, at the end of the experiment, were still unsuccessful in pitch placement.

5. There were two children, or 4% of the entire group, who showed no progress.