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Vocal technique for elementary schools

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VOCAL TECHNIQUE
FOR ELEMENTARY SCHOOLS

by

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B. Mus., MacPhail College of Music, 1926
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Presented in partial fulfillment
of the requirements for the degree of
Master of Music Education

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This professional paper has been approved by the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Music Education.

Stanley M. Teel
Chairman of the Board of Examiners

J. Donald Castle
Dean of the Graduate School

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C. R. C.
INTRODUCTION

The art of training the voice for singing and, to a lesser degree, for speaking has long been considered, particularly by the voice teaching profession, to be solely within the province of the special voice teacher. Yet the writer has often wondered, during nearly thirty years as a supervisor of public school music, as a director of choruses and choirs, and as a private voice teacher, whether certain vocal techniques, considered basic by the writer, can be mastered easily by elementary classroom teachers and transmitted effectively by them to their pupils. The experiment, of which this paper is a report, was conducted to test the proposition that such techniques do exist and that they can be transmitted.

It goes without saying that the speech and singing habits of the average American need improvement. It is the writer's opinion that the best place to begin this improvement is in the elementary schools, where the great majority of the future generations will be reached. Outside of the home, those in closest contact with the elementary school pupils are the classroom teachers. They are the ones who can most effectively bring about this improvement, provided they are given a little added training in vocal technique.

To aid in this training, as an experiment, the
writer prepared a guide or manual for the elementary classroom teachers, to aid them in improving the speech and singing habits of their pupils. This guide is based on the writer's many years of experience, together with opinions, expressed verbally and in writing, of many authorities on the teaching of voice.

This guide or manual on vocal technique was tested during the past two years in the first five grades of the public schools of Billings, Montana. Individual and group voices were recorded in 112 classrooms. Some of these classes were given the added vocal training described in the manual; others were not. Then all classes were recorded again. Comparisons were made between the earlier and later recordings and between classes that had had the vocal technique and those which had not.

The background of musical training and experience of most of the teachers involved was obtained from a questionnaire submitted to the teachers. Opinions regarding the study and application of the vocal technique were secured from the teachers who co-operated in the project.

Subsequent divisions of this paper will include a statement of the basis of the vocal method, the manual used in the experiment, a description of the experiment, a discussion of the musical background of the teachers, a statement of the opinions of the teachers who volunteered for the additional vocal study, and an evaluation of the results of the experiment.
THE BASIS OF THE VOCAL METHOD

The vocal method, as advocated by the writer for elementary classroom teachers, consists of five main points: (1) good posture; (2) adequate breath control; (3) development of clear, resonant vowel tones; (4) formation of distinct consonants; and (5) establishment of meaningful interpretation. Many books have been written on each point (see Bibliography), but space here will permit only the briefest discussion.

GOOD POSTURE

Good posture requires an erect position, either sitting or standing, so that the shoulders and ribs sustain their own weight and the head is supported by the muscles in the back of the neck. Thus the muscles of the abdominal and intercostal regions, commonly referred to among teachers of voice as the diaphragm, are left free to manage the breath, and the muscles of the front of the neck, the throat, jaw and tongue are left free to manage the vocal tones and articulation.

ADEQUATE BREATH CONTROL

Adequate breath control demands free inhalation and controlled expulsion of the breath. This is best achieved
by keeping the shoulders and upper chest relatively motionless, as far as breathing is concerned, and flexing the muscles of the diaphragm to inhale or expel the breath. Various exercises can be devised to train and develop the muscles of the diaphragm and increase the capacity of the lungs.

DEVELOPMENT OF CLEAR, RESONANT VOWEL TONES

All good singing is based upon clear vowel tones. Most voices acquire their initial vowel tones by imitation. Imitation of tones is based on a sense of hearing. Therefore it behooves those who would improve their voices to listen carefully to the qualities of voices they admire. Not all are good imitators, however, so an understanding of the function and action of the vocal cords is essential to those who would improve the voices of their pupils.

FORMATION OF DISTINCT CONSONANTS

Since songs are a combination of music and words, it is of primary importance that the words be clearly understood. Clarity of articulation is dependent upon the action of the lips and tongue in wholly or partially stopping the breath, and upon the amount of breath being stopped by the lips or tongue. An awareness of this action brings about more effective use of the proper muscles.
ESTABLISHMENT OF MEANINGFUL INTERPRETATION

Each song had its original interpretation in the mind of its composer. If there is any doubt on the part of the teacher or the singer as to what that interpretation was, he should examine the text and attempt to sing the song as nearly as possible to the way the words would be spoken most naturally. While there are exceptions to this rule, it will apply to most songs used in elementary school music.

These five fundamentals were the basis of the vocal method used in the experiment in the Billings schools.
INTRODUCTION TO THE MANUAL

There are basic vocal techniques which can be mastered easily by elementary classroom teachers and transmitted effectively to their students. Many adults are handicapped in their mature years by ineffective speaking voices. Formation of proper vocal habits during formative school years should do much to provide effective voices for the adults of tomorrow.

If one's articulation is poor, it is difficult for his listeners to understand the thought he wishes to express. However, being understood is not always enough. "The expressiveness of the voice itself—the tone—is probably the most powerful single agency in speech. It has probably more to do than anything else with making us like or dislike the speaker."¹ "In talking business nothing is more immediately and incessantly important, both when you speak and when you listen, than close perception and ready command of the play of quality of tone,"² says John Mantle Clapp in his book, Talking Business. He comes pretty close to home when he writes, "The tense, sharp tone of overworked school teachers, supervisors or foremen, however competent in

²Ibid., p. 168.
general they may be, often kills their usefulness to pupils or subordinates."³ Emil Froschels, an eminent European vocal therapist, writes

Professional singers and speakers, such as teachers, politicians, lecturers, preachers, etc., who have to stand great professional strain without sufficient technical preparation, often try to overcome fatigue or decrease of their vocal capacities through some acute disease, for instance a cold, by augmented use of force. They tighten muscles which should work with ease. The effect is an ever increasing overstrain of these muscles, which may even result in some organic alteration, such as the bursting of small blood vessels, irritation or inflammation of the tissues, irritating sensations with the resulting coughing. The nodules of the vocal cords, so greatly feared by singers, are among the effects of such overstrain . . . . They are an effect of false vocal technique and may be removed without operation if this technique is corrected and if the patient learns to use his vocal apparatus correctly.⁴

The inference can be drawn that teaching would be easier and more effective if teachers made sure that their voices were attractive and their articulation distinct. They would have an added satisfaction in knowing they were avoiding unnecessary strain or risk of injury to their voices. Of still greater importance to most teachers would be the confident knowledge they were setting an example for and developing habits in their students that would be of lasting benefit.

In addition to knowledge learned from books and

³Tbid., p. 169.

⁴Froschels, Emil, Practice of Voice and Speech Therapy, Boston, Expression Co., 1941, pp. 194-5.
lectures, and manual skills learned in school shops, the
student of today is guided in matters of citizenship and
his adjustment to society. Elizabeth Avery and her associ-
ates write [paraphrased by the author],

The growth of interest in the improvement of
American speech, through scientific experiment and
research, has led to the better understanding of:
(1) the structure and functions of the speech
mechanism, (2) the nature of voice and speech
sounds, (3) the importance of ear training in
speech development, and (4) the fact that social
adjustment is a preparation for good speech but
good speech is an aid in social adjustment.

They go further to urge that social adjustment should be
the primary purpose of education and that speech training
should be

One of the most effective elements in the educa-
tive process. . . . We should insist upon the impor-
tance of the best possible physical and mental basis
for speech. . . . Voice production and articulation
are inseparable parts of the same speech process. .
. . Ear training is of basic importance. . . . We
should convince the student that speech is an in-
tegral and vital part of the whole life process.

Another authority agrees in these words: "Your voice is a
vital part of your personality."7

The American Academy of Teachers of Singing8 lists

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5Avery, Elizabeth; Dorsey, Jane; and Sickles, Vera
A., First Principles of Speech Training, New York, D.
Appleton-Century Co., 1928, p. XXIII.

6Tbid., pp. XXIII-XXIV.

7Karr, Harrison M., Your Speaking Voice, Glendale,
Cal., Glendale Printers, 1938, Foreword.

8American Academy of Teachers of Singing, a pamph-
let, Reasons for Studying Singing, New York, n.d.
many reasons for studying singing. Among them are some that may well be considered by those who are concerned with guidance of the younger generation. The Academy advocates that proper singing is healthful in that it develops the lungs. It benefits one's appearance in developing good posture and graceful carriage. It creates an expressive countenance and animated mind. It develops poise and self-confidence as well as a pleasanter, richer speaking voice, which is part of charm.

John J. Dawson states in his book, The Voice of the Boy,\(^9\) that vocal training helps in training the emotional nature. It is also helpful, he maintains, in developing the lungs, the muscles, and nerve control. From the practical side he points out that vocal training has business value in improving the impression of an individual on his associates by means of a musical and effective voice. Mr. Dawson makes a most telling point in saying that "the object, method and exercises of vocal technique can be made simple enough to interest the boys and enable regular teachers of even moderate musical ability to use them successfully."\(^9\)

Dr. Frank E. Miller advises

The earliest attention to voice training, not only by individual and standard set exercises, but also by presenting good models of speech and song to the young, by the avoidance of bad habits and by that careful cultivation of clear enunciation

that marks the well trained child.\textsuperscript{10}

Clarence Raymond Van Dusen writes, "It is easy to implant new habits in the young child, but as he gets older the task becomes more and more difficult."\textsuperscript{11} Thomas Fillebrown goes further to say:

After the child begins to talk, the sooner his vocal education begins the better.\textsuperscript{12}

The teachers of the kindergartens and primary schools should be familiar with the principles of voice training and be able to start the pupils at once on the right road.\textsuperscript{13}

The sooner this branch of training of education is made a part of the curriculum of our common schools, the sooner shall we produce a race of good speakers and singers.

If during the pupil's school life, proper attention is paid to these elementary principles and to correct articulation, a large majority of students will graduate from our common schools prepared to advance in the art of elocution or of singing without first being obliged to unlearn a vast amount of error and to correct a long list of bad habits.

If each day in the public schools a few minutes only are devoted to the subject by a teacher who understands it and who will call attention of the pupils to the proper application of the principles in their daily recitations, it will be found amply sufficient to develop and establish a good speaking and singing voice.\textsuperscript{14}

\textsuperscript{10}Miller, Dr. Frank E., \textit{Vocal Art-Science}, New York, G. Schirmer, Inc., 1922, p. 13.


\textsuperscript{12}Fillebrown, Thomas, \textit{Resonance in Singing and Speaking}, Boston, O. Ditson Co., 1911, p. 77.

\textsuperscript{13}\textit{Ibid.}, p. 78.

\textsuperscript{14}\textit{Ibid.}, p. 80.
"... there are many things in voice culture that can be taught successfully in class," writes D. A. Clippinger.

For example: the principles of breath control can be taught to a class practically as well as to an individual. The formation of vowels, the concept of pure tone, how to free the vocal instrument from all forms of interference, enunciation, the principles of phrasing, the development of resonance, these and many others of the essentials of voice training can be taught collectively, thereby not only preventing young singers from forming bad habits of tone production, but saving them much time when they go to a private teacher.\textsuperscript{15}

Voice training is simple. Voice training is neither difficult nor uncertain when the nature of the problem and its basic principles are understood. ... if the teacher is wise he will not go beyond the elementary phases of vocal anatomy and physiology, but will give his attention to how it sounds and his efforts to securing that freedom which results in automatic responses of the vocal instrument. A general knowledge of the structure of the vocal organs is all that is necessary.\textsuperscript{16}

Several authorities stress the fact that speaking and singing are similar. "The tone should be produced in the same manner for both speaking and singing."\textsuperscript{17} "The normal functional activities of the vocal organ are precisely the same in kind, whether used in singing or speaking... physically the difference is only in degree, not in kind."\textsuperscript{18}

\begin{flushright}
16\textsuperscript{16}\textit{Ibid.}, p. 7. \\
17\textsuperscript{17}Karr, \textit{op. cit.}, p. 134. \\
\end{flushright}
by the same organs in the same way and developed by the same training. Breathing is for the singer only an amplification of the correct daily habit. 19 "One great distinction is that singing is a fine art while speaking is primarily a practical art. Singing exists for its esthetic quality; but speaking, in most situations, is a tool for getting a desired result." 20

John Mantle Clapp says that, "A good voice can be made with (1) the right mental attitude and (2) definite muscle training ... which establishes physical control." 21

He advises business men, "If possible get instruction in singing. It is a directly profitable investment for any man who is to be a salesman or to direct in any way the activities of other people." 22 If that advice is good for business people it is equally good for those who are educating the future business people and future teachers.

One final point should be made regarding vocal technique for young people and that is that the same technique is used by all ages. This is substantiated by the American Academy of Teachers of Singing, an organization made up of many of the most prominent teachers of singing in America, which says:

19 Fillebrown, op. cit., p. 5
20 Karr, op. cit., p. 135.
21 Clapp, op. cit., p. 146.
22 Ibid., p. 163.
The American Academy of Teachers of Singing presents the following beliefs regarding this important subject, which beliefs, in consultation with various authorities, have received definite substantiation.

WE BELIEVE that the functioning of the voice of the child, of the adolescent, and of the adult is governed by identical physical laws: that the principles governing the use of the voice are the same in all three stages.

From childhood to maturity there is a development of the body structure, but no change in position or muscular action.

WE BELIEVE that these principles demand a balance in the posture of the body, in the position of the vocal organs, and in their muscular activity, and, a coordination of the whole. The ideal procedure is to teach the child correct habits in these matters during the early years. The habits of the early formative period then will carry through the various changes as the individual and the voice grow and mature.\(^{23}\)

Authorities thus seem to agree on several points: that a good speaking voice is valuable, that speaking and singing require the same kind of physical action, that training in singing will help both the speaking and singing voice, that the principles governing the use of the voice are the same for children, adolescents and adults, that training in vocal technique may well be started in the earliest grades of our schools.

\(^{23}\)American Academy of Teachers of Singing, Some Principles in the Care and Development of the Human Voice from Childhood through Adolescence to Maturity, a pamphlet, Walter L. Bogert, 25 Claremont Ave., New York, n.d.
THE VOCAL METHOD MANUAL

It well may be asked, "How are elementary classroom teachers to train the voices of their students when they have had no voice training themselves?" That is the question this chapter will attempt to answer.

First it must be understood no recommendation is made that classroom teachers should produce finished vocal artists in their pupils. That is the province of the special voice teacher. The objective of this work is to help classroom teachers to establish good basic vocal habits which will serve their students well the rest of their lives.

Habits change, and it is human nature to take the way requiring the least effort. Students will develop careless habits of speech and singing unless the value of better habits can be pointed out to them. In order to be effective these better habits will have to become a part of their daily lives, not just a vocal gymnastic practiced during the music period. As the teacher examines the following elements of vocal technique she will need to make them part of her vocal habits and in so doing she will not only set an example for the members of her class but will be more alert in recognizing bad habits of her students. Consistent attention to the formation of good habits of voice production during all
periods of the day will pay off in the long run, requiring less time and energy and producing far better results. The extent of the success of any teacher in developing good vocal habits in her students will depend upon her ability to comprehend the principles of good vocal technique and apply them to herself, her ability to hear accurately, and her ability to translate what she knows and what she hears in terms her students may understand and appreciate.

One author lists three sources for voice improvement: (1) a speech therapist, a private individual who corrects speech defects; (2) a competent vocal teacher and (3) one's self. Under the last classification he suggests that the first concern for the individual is to train his own ear as a guide and teacher. He outlines a program for training the ear. This program includes (1) improving the attention factor, i.e., the ability to hear things the first time, to be alert; (2) improving the general auditory acuity, i.e., the ability to hear different qualities in a sound, and (3) using transcriptions of one's own voice to compare with records of recognized singers and speakers, trying with each transcription to improve the quality of one's tones and articulation. Father William J. Finn, famous director of the Paulist Choristers, in writing to the Sisters in the Parochial Schools, advises anyone training young people in

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2Ibid., Part II, passim.
singing to "study tone color." In other words, one should listen to tones in order to learn to recognize the qualities that are free and pleasant and to distinguish the qualities that are forced and strained.

As freedom of muscular activity is most essential to the production of good vocal tones the elements of vocal technique will be taken up in the following order: posture, breathing, tone, consonants, and interpretation.

POSTURE

The American Academy of Teachers of Singing states as one of its beliefs,

... that the principles of balance in the posture of the body, in the position of the vocal organs and in their muscular activity should be taken up in that order, as the first steps in formative training at any stage of the individual's development, whether child, adolescent or adult.

In order to do his best in a foot race a runner needs to lean forward before the starter gives the word, "Go."

In a similar way a singer needs to get into the most effective position for the free use of his voice. The National Association of Teachers of Singing says, "an upright

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spine, which will automatically bring the ribs and breastbone into proper position, with head upright and neck muscles free from rigidity, is the essential requisite for good singing posture."

The following exercise will enable one to assume the correct position: (1) stand erect; (2) inhale while raising the arms laterally to a horizontal position; (3) hold the breath and lower the arms; (4) let the breath go but keep the chest from dropping. The resulting posture will be found effective for singing. One foot slightly ahead of the other, with the weight on the balls of the feet, will give added poise. Some would recommend a little more weight on the forward foot than on the other foot. Another detail can be added to insure relaxation of the throat muscles: as the breath is being released pivot the head from side to side, noting that only the muscles in the back of the neck are used for this action and the throat muscles are relaxed.

In correct posture for singing, certain of the major trunk muscles must operate constantly to keep the body erect. There are other muscles which can keep the chest up without interference with the breathing muscles. Observation of the pupils in any school classroom will disclose that many have become quite flat chested. They were not born that way. Their attention has not been called to the advantages of

5National Association of Teachers of Singing, Inc., pamphlet, Training the Vocal Instrument, Evanston, Ill., Walter Allen Stults, Box 694, 1946. (Not to be confused with the National Academy of Teachers of Singing.)
good posture in language they can understand and value. Telling them to sit up or stand straight may work for the moment, but if students are to make good posture a habit they must acquire a pride in that posture with the knowledge that it not only represents the best position for singing and speaking but that it also makes them more attractive, makes them appear more alive. A teacher can do more with a group if she is enthusiastic about the program she is presenting. Our most successful classroom teachers enjoy doing things with their pupils and derive their greatest satisfaction in watching the young people absorb the knowledge and skills the teachers are able to present.

When the posture exercise has been mastered so that the shoulders and upper chest do not sag when the breath is released the class is ready to consider breath control.

**BREATH CONTROL**

The National Association of Teachers of Singing says

In the act of inhalation the lower ribs will spread outward and upward, the front wall of the upper abdomen will expand outward, and the back muscles will slightly expand the ribs at this place... The upper chest and shoulders should not rise during inhalation beyond the level established by good posture.\(^6\)

The posture exercise\(^7\) can be adapted to become one of the best breathing exercises. (1) Stand erect; (2) inhale

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\(^6\)National Association, *loc. cit.*

\(^7\)Cf. *supra*, p. 17.
raising arms laterally to a horizontal position; (3) keep arms extended and exhale vigorously as if to blow out a candle; (4) lower arms and repeat. If the arms remain motionless in the horizontal position when the breath is expelled they will indicate the upper chest has not sagged, but that the breath has been expelled by the abdominal and lower rib muscles.

If, on the other hand, the arms dipped as the breath was expelled it is evidence the upper chest muscles were used improperly. It will be necessary to repeat the exercise until the breath can be expelled without dipping the arms. This exercise has been used with six-year-olds in the first grade in the Billings Public Schools and invariably they have become aware that they have used the muscles of their "middles" to blow out their breath.

But some authorities say, "We don't talk about breath in singing. If we need more breath we will take more breath." So we tell our runner if he wants to run faster to just try harder. The fallacy of this argument is apparent. Just trying harder merely exaggerates the existing faults. As an illustration consider running as fast as one can with the hips ahead of the shoulders. The position is unnatural and prevents the effective use of one's energy in running. So it is in breathing. Trying harder may draw more air into the lungs but if lack of control existed before the greater

8Ibid., p. 16.
effort was made that fault will be aggravated by the greater effort.

Breath is the agency which causes our vocal cords to vibrate. It is like the motor in our car. Many have learned to their sorrow that lack of attention will cause plenty of trouble in time. It is not necessary to know all the parts of the car, but it is necessary to know when it should be serviced or that it should be checked when it does not work right. To get the best performance it is necessary to know how to operate a motor vehicle most effectively. Likewise in breathing for singing or speaking it is necessary to know how to get one's breath most easily in sufficient quantity.

It is not suggested that elementary classrooms be turned into laboratories for the development of phenomenal breathing. But during the course of the day there are many times when a few moments devoted to breathing exercises will greatly freshen the students for continued work, either in music or other subjects. The first exercise has been suggested. When the shoulders and upper chest have acquired the habit of remaining relatively motionless during breathing, raising the arms may be eliminated from the exercise.

A further development of this exercise is to expel the breath in several short puffs instead of a single "blow." This will train the muscles of the abdomen and the diaphragm to respond more readily to the will. Carol Marhoff Pitts says,
All these muscles are continually used in supplying the necessary breath in all singing and speaking, but are particularly active when we want VOLUME, ACCENT, CRESCEndo, and DIMINuendo—in short, all dynamics. They directly control the rate of speed at which we use our breath, which we call breath control—a most important skill for the singer to acquire. We shall need to train this breathing apparatus until its action becomes automatic and meets any demands made upon it by the singer.  

To increase the capacity of the lungs one can sip the breath as through a straw. One can thereby sense the muscles that help to pull the breath into the lungs. As these muscles are strengthened through greater use it will be noted that increased amounts of breath can be inhaled through greater expansion.

Great quantities of breath will be of no value in singing unless the release of the breath can be controlled. Some advocate the slow release of the breath in a soft hiss to train the abdominal and lower rib muscles to expel the air in a steady, even stream. The same purpose can be served more effectively by singing a moderately soft, even hum, adding the vowels and consonants as experience warrants. In the first use of this exercise, after a full breath has been taken, hum a long single tone. The purpose of the exercise is to keep the one steady, to avoid surges of tone and pulsations. The shoulders and upper chest should be kept in the position of good posture. The abdominal and

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_Ibid._, p. 10.
lower rib muscles will contract to exert just enough pressure of breath to keep the vocal cords vibrating. Later on, as the vowels are studied, this same exercise can be used with vowels instead of the hum.

A variation of this exercise would be to use familiar melodies, if they do not go too high or too low or have complicated rhythms. The objective of the exercise must be kept in mind: to release the breath as steadily as possible and to make it last as long as possible without completely exhausting the supply of breath. Always keep a reserve.

The use of this variation will depend upon the level of the class. Some classes will do well to limit their practice of control of breath to single tones. Other classes may use parts of phrases, while the more alert and advanced classes may sing one or more phrases on a single breath to demonstrate how important it is always to take enough breath and then to use it efficiently. Lily Pons, as quoted by Karr,11 gives her favorite exercise as singing with a lighted match three or four inches from the mouth, from pianissimo to fortissimo, up to a minute and a half, without disturbing the flame. The average person will do well to sustain a tone forty-five seconds without having exhausted his breath supply.

One other phase of breath control should be considered and that is the increased support or pressure from the

11Karr, Harrison M., Your Speaking Voice, Glendale, Cal., Glendale Printers, 1938, p. 137.
abdominal and lower rib muscles for either higher or louder tones. At first it would seem the muscles never would be used as vigorously in singing as they were used in the first breath exercise, the "blow" exercise. The chief purpose of that exercise was to discover the breathing muscles and to bring them under control. For years the author has listened to discussions at meetings of the Music Educators National Conference regarding methods for helping monotones. Imitating the fire engine, calling someone upstairs or at a distance and other devices have been suggested, but none seems to work as well as a combination of the vigorous "blow" exercise and the call, "Yoo Hoo," sung as high as possible on a descending minor third (do-la or sol-mi). It often gets a laugh from the class and this serves a double purpose of gaining the co-operation of all and of relaxing any tension that may have existed.

In cases where the tone persists as a seeming "throat" tone, it usually helps to have the youngster bend over, place his hands on his knees and look at the floor as he sings (almost shouts), "Yoo Hoo." Without going into the technical phases of this exercise it is sufficient to recognize that in bending over and looking at the floor with his hands resting on his knees the student has immobilized his shoulders and upper chest, his chin is "in" and, almost of necessity, any more vigorous tone will be higher. The student will sense the greater resonance near the roof of the mouth and in so doing will have discovered what is often called
"head resonance" or a "head tone." Sensing the tone other than in the throat is often all that is needed to start a monotone on his way to joining the "singers" in the class.

Modification of this exercise includes repetition of the "Yoo Hoo" in gradually straightening positions until the "Yoo Hoo" can be sung in an upright position with the same forward feeling and sounding of the tone. The next step is to sustain the "Yoo" on a single tone. From the "Yoo" the vowel is gradually changed to the desired vowel in a word in a song the class may be learning. As other pitches are added to his voice the student is no longer a monotone.

With some students the inability to sing beyond a monotone is lack of maturity, and for this time is the answer. With others the lack of co-ordination is due to a lack of experiencing any tones beyond a conversational speaking voice. The preceding exercises usually work more rapidly with these students. In fact all the members of the class will benefit from these exercises in finding higher tones than they had previously sung and without strain other than the vigorous use of the abdominal and intercostal muscles. Once the tones have been discovered it will be found they can be repeated without the more vigorous effort used in the initial trial. It must be kept in mind at all times that the ideal vocal technique uses just enough breath to permit the vocal cords to vibrate freely and efficiently. Westerman puts it this way: "Balance the breath against the
resistance of the closed vocal lips that the tone produced may be breathless and not forced.\textsuperscript{12} He uses the term, "vocal lips," instead of vocal cords. By "breathless" he means not breathy. The use of the extra breath energy is recommended only as a means of discovering additional tones.

Many teachers have reported to the author during his supervisory visits to the classrooms that they have been unable to keep the class from "flatting." In each case only a few minutes devoted to discussion and exercises on breath support and the classes have kept their songs right in pitch. The specific thing to watch for is insufficient increase of breath support on ascending passages and too great relaxation of breath support on descending passages in the music. One can drill until his patience is taxed and the class is quite bored talking about "ear" and "listening to the pitch." If the breath support is not sufficient the tones will go flat. The "ear" is very valuable; in fact it is essential to all good singers. But even good singers will go flat if their tones are not adequately supported.

TONE

Tone has many characteristics: pitch, quality, intensity, duration. For many years in the public schools pitch, or tone matching, has been the first consideration of the primary classroom teachers in their teaching of music. A  

\textsuperscript{12}Westerman, Kenneth N., Emergent Voice, Ann Arbor, Michigan, Dr. Kenneth N. Westerman, 1947, p. 20.
teacher who cannot hear correct intonation cannot teach music effectively at any level. Consequently it is imperative that all classroom teachers who teach their own music should check their ability to hear correct intonation of unisons and intervals. Some teachers are graduated from their own training schools without sufficient preparation in ear training and sight reading. They may be excellent teachers in other subjects and could be good teachers of music with better preparation. As school taxes are paid for the benefit of the students who are to be educated it behooves such teachers to obtain additional preparation in ear training and sight reading. In larger school systems this additional training should be available from the head of the music department or one of the staff members. In smaller systems there are usually a few of the other classroom teachers who are very capable and competent to coach those who need help. If there is no satisfactory source of additional training during the school year it may be necessary for the teacher who is not capable of teaching her own music to trade classes with one who is capable. In such cases the capable teacher in music should have the privilege of naming the subject the other teacher is to teach in exchange. This is mentioned because it has come to the attention of the author that in some such cases the non-music teacher often offers to teach what is generally considered an easier subject. In schools where no teacher is available to teach music for the non-music teacher some benefit can be
salvaged from what would otherwise be a total loss in music by the use of carefully selected phonograph records. Some elementary music text books have recordings of some of their songs. Some phonograph recording companies have graded sets of records.

The pitch of a vocal tone is determined by the size and tension of the vocal cords. The vocal cords are often called vocal lips as they are in reality more like the lips of the mouth than like any cord with which one is familiar. One can get a fair approximation of the action of the vocal cords by pressing the lips of the mouth together and forcing the breath through the lips. This will produce a buzzing sound. If one has great strength in the lips and in the breathing muscles he can vary the pitch of the buzz by changing the breath pressure and the stretch of the touching surfaces of the lips. Cornet and other brass instrument players are well aware of this action of the lips, as this is the way they change pitch on their instruments. A bugle is a more simple brass instrument requiring the same lip changes for changes in tones. There are no valves on a bugle to make intermediate tones possible. If one is successful in producing the buzzing sound with the lips of the mouth one will note that many muscles surrounding the lips are required to reinforce the lip muscles to create sufficient tension on the inner surfaces of the lips to produce the buzzing sound. The action of all these muscles is necessary if one is to vary the tension of the lips and thus vary the pitch of the buzz.
The vocal cords and the surrounding muscles work on the same principle as the buzzing lips but are so constructed by nature that they vibrate with much less effort. They are situated in the middle of the larynx or Adam's Apple in the throat. If the larynx was exposed so that the breath and tonal vibrations did not have to pass through the mouth and nasal passages in exit the vocal cords would produce little more sound than a lip buzz. "The vocal cords produce pitch, nothing else. They must offer enough resistance to the breath to convert it into sound waves of sufficient strength to generate resonance in the upper cavities."13 The vocal cords start the vibration. The mouth and nasal cavities shape the vibration into the kinds of sounds known as vowels and consonants or words.

The vocal cords and surrounding muscles are involuntary muscles. They cannot be moved at will as the muscles of the fingers can be moved. Involuntary muscles are controlled by natural functions of the body or by thought concepts based on experience. New born babies are spanked by the doctors to start the breathing muscles. The first vocal tones in life are those of the crying infant. It may be that the next tones in the experience of an individual are little hum-like sounds of pleasure as the infant nurses. Gradually, as the infant finds uses for the mouth other than eating, other sounds are made. As the child develops he

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learns to imitate the sounds of those around him. In time these sounds are put together in speech. An individual learns the type of speech used by his parents and associates. If they are German he learns many gutteral sounds. If they are French he learns many nasal sounds. If they are American he may learn any one of a number of language forms, from "Brooklynese" to a southern accent. If the parents and associates are well educated, in all probability the individual will learn his language forms more particularly than if they are not so well educated. Whatever the type of language forms learned by an individual in his growth and development they become natural to that individual through habit. "The mind builds controls into the brain. In time they become automatic."\(^{14}\)

To control the vocal cords and other involuntary muscles of the voice mechanism it is first necessary to be sure these muscles are free. Good posture and adequate breath support are important aids in keeping the vocal muscles free to respond to the mental concept of tone. The next step is to think the tone. This is where the teacher is most important. The youngster has had a wide variety of experiences in creating tones, judging from the sounds of the pre-school youngsters in the average neighborhood. It is the function of the school to associate these sounds with fixed patterns of pitch and parts of speech. Some students readily grasp the intervals of the major scale. Others need

\(^{14}\)Westerman, \textit{op. cit.}, p. 78.
to be coached in the necessity for giving increased breath support as the pitch ascends to higher tones. This will be understood by the teacher when it is realized that the vocal cords tighten to produce higher tones and consequently present more resistance to the breath. The value of the teacher in this phase of vocal training lies in his or her ability to judge whether the proper amount of breath support is being used for any given tone. If the tone sounds flat or lacking in color it is a sign not enough breath support is being used. If the tone is breathy undoubtedly too much breath is being used. The remedy in such a situation is to recommend more careful formation of the vowel sound. Successive steps would be to speak the vowel, then sing it on a lower pitch and finally sing it on the desired pitch, each time being sure the vowel is sounded as purely as possible. The aim of such an exercise is to find the right amount of breath to vibrate the vocal cords as efficiently as possible.

Another characteristic of tone is quality. Some speak of tone color as tone quality. Others prefer to say that tone quality is determined by resonance. Both are correct as tone color is determined by resonance. A few experiments will show the effect of resonance on tone. Harrison M. Karr suggests the following:15 (1) Tap the cheek with a pencil while holding the mouth open; change the shape of the mouth and note the change in tone. (2) Play a

Jew's harp first in the hands, then between the teeth while changing mouth shapes. Note the lack of tone when the harp is played in the hands and the change of tone as the mouth changes when the harp was held between the teeth. (3) Strike a tuning fork and hold it in front of the mouth while changing the shape of the mouth; note the change of tone corresponds to the change in mouth shape. (4) Strike a tuning fork and hold it over a tumbler as the tumbler is being slowly filled with water; note the change of tone as the amount of air or resonating cavity is being reduced in size. It will be noted in all of these experiments that the tone will be more greatly reinforced with certain shapes of the mouth or amounts of resonating cavity. Another experiment is to sing "ah" and place the thumb and first finger joined around the mouth; then gradually close the rest of the fingers. It will be noted that the sound of the "ah" will change toward an "oh" sound as the fingers close even though the mouth continues to sound "ah."

These experiments will indicate that the quality of tone is determined by the shape and size of the resonating cavities, which are the mouth, the pharynx (the opening at the back of the mouth behind the uvula) and the nasal cavities. As each individual differs from other individuals in the size and shape of various parts of his anatomy so do the size and shape of each individual's resonators vary to the extent that his voice will sound different from others. Vocal technique in regards to tone deals with the variation
in shape of the variable resonators to permit the maximum
in resonance each individual is capable of producing.

Cornelia Otis Skinner is quoted by Karr, in giving
her favorite exercise for developing resonance, as saying,
"I hum a lot until my head seems to reverbate like a
bell."

Gladys Swarthout is quoted by the same author to
the effect that she sings the letters \textit{mn} to develop re-
sonance, later adding the long \textit{a}, (\textit{mn ay}) to the exercise.
Eventually she uses the sound \textit{ah} in place of the \textit{ay}.

Westerman says, in effect, that the \textit{m-hum} (the \textit{m} of the affir-
mative sound \textit{m-hm}) is the best exercise, it uses the least
muscle action and creates the greatest fundamental reson-
ance.

"The m-hum is the basic technique for the over-
lapping and blending of the musculatures of posture,
respiration, phonation and resonance." William Warren
Shaw says,

\ldots the proper use of resonance demands the
relaxation of the muscles of the back of the tongue,
the muscles of the soft palate and the muscles of
the ventricular bands [the false vocal cords]. The
principle function of these structures is in the act
of swallowing and they should remain quiescent dur-
ing tone production.

What these authors are saying is that one can most

\begin{itemize}
\item \textbf{16} \textit{Ibid.}, p. 154.
\item \textbf{17} \textit{Ibid.}, p. 145.
\item \textbf{18} Westerman, \textit{op. cit.}, p. 71.
\item \textbf{19} \textit{Ibid.}, p. 74.
\item \textbf{20} Shaw, William Warren, \textit{Authentic Voice Production},
Philadelphia, J. P. Lippincott Co., 1930, p. 73.
\end{itemize}
easily recognize and develop tonal resonance through humming and that greater resonance will be developed if the swallowing muscles are relaxed. The author for years has suggested the beginning of a yawn to convey to students the proper throat position for humming. Taking a deep breath with the mouth open gives somewhat the same sensation of the opening of the throat, with the back of the tongue dropped as low as it will go. An exercise to test the hum resonance is to pluck the lower lip with a finger while humming. If the hummed tone sounds like "mum" each time the lip is plucked the resonance is properly located. If, on the other hand, the hum does not change to a vowel sound as the lip is plucked either the back of the tongue or the soft palate is not free. In a proper hum the vibration should be felt on the lips.

The next objective in vocal technique is to retain the full resonance of the hum when singing vowels. This is most easily mastered by starting with a hum and continuing the tone into a vowel by changing the position of the lips and tongue only enough to form the vowel. To form "ah" it is only necessary to drop the jaw until the lips are drawn apart. To form "oh" it is necessary not only to drop the jaw but to round the lips. Some of the color of the "oh" is lost if the lips are not rounded. To form the sound of long u or of "oo", as in boot, the lips should be protruded beyond the "oh" shape. To change from the hum to the long a, as in fate, the tongue is arched slightly as the lips
open. The jaw is dropped only slightly. The long e vowel sound, "ee," as in feet, is formed with the tongue arched higher than for a. The sides of the tongue at the highest point of the arch will touch the upper molars. To sense the differences in lip and tongue positions for these vowel sounds it is well to say over the vowels in pairs such as: e-a, e-ah, ah-oh, and oh-oo.

Some vowels in the English language have two sounds while others have but one. For instance, i has principally the sound of "ah" but ends with the sound of "ee." o ends with the sound of "oo." Long a also ends with an "ee" sound. Many untrained singers change to the second sound for these vowels too soon. For better vocal technique the first sound for these vowels should be sustained until just as the vowel is to be released, when the second sound should be formed but briefly in ending the vowel or in passing on to the sound of the next letter. As has been noted, the different vowels are formed by different shapes of the lips and tongue which result in different shapes of the mouth resonating chamber. Vowels with two sounds require a change in the resonating chamber for the second sound. If the second sound seems too pronounced, as if the word, "mite," were pronounced, "mah-eet," a good rule to follow is to reduce the amount of change from the "ah" to "ee" in the pronunciation of the long i. This same rule would apply to the other vowels with two sounds.

So far in the consideration of the characteristics
of tone no mention has been made of the effect that changing pitch has on resonance. It will be remembered in the experiments to show the effect of resonance certain tones were reinforced more strongly by particular sizes or shapes of resonating chambers. Continued experiment will show that "... for every note of the human voice and for every gradation of force pertaining to it, there is a condition of the mechanism of the instrument which is appropriate to this and to no other note." Another way of saying this is that each tone throughout the range of each individual voice has a position of the resonators which will most strongly reinforce that particular tone. "The shifting angle of the arch of the soft palate as the pitch ascends changes the location of the feeling of the vibration concentration, which rises into the bony structure of the head." In vocalizing one should find the feeling and listen for the sound of the greatest resonance for each individual tone and for each vowel. Then, in vocalizing on changing pitches, scales, parts of scales or melodies, one should sense a change of resonance for each change of pitch. The best position of resonance for each tone will be the easiest position for full tone production and will lead most easily to the next tone. The principles of good posture and

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21 *Cf. supra, p. 30.*


23 *Westerman, op. cit., p. 81.*
adequate breath support should be employed throughout.

CONSONANTS

Consonants are the parts of language which wholly or partly stop the flow of tone. One can liken the flow of tone to a light flow of water through a small hose. Consonants can be likened to the placing of the thumb over the end of the hose. If the pressure of the water is not too great the thumb can completely stop the water momentarily. Or the thumb can partially stop the water for a longer period. Similarly, the lips and tongue can wholly or partly stop the vocal tones to form consonants.

Consonants may be classified in several ways. To understand their classification will help to know which muscular action should be developed to improve their articulation. Westerman classifies consonants in three forms: 1) breathy, 2) voiced, and 3) hummed. In his classification there are three groups of consonants having all three forms. The first group is formed by the lips: p, b, m. The second group is formed by the tip of the tongue: t, d, n. The third group is formed by the back of the tongue: k, g, ng. Five groups have only breath and voiced forms. They are as follows: 1) puckered lips, wh and w; 2) lower lip to upper teeth, f and v; 3) tongue between teeth, th as in thin and th as in then; 4) tongue close to roof of mouth, s as in sing and z as in zero; 5) tongue close to roof of mouth with lips puckered, sh as in shall and z as in azure or s as in
pleasure. One group he calls "consonant-vowels" and includes l and r. The h is called a "pure breath" consonant and a final group is made up of combinations of other consonant sounds: x having the sounds ks or gs, q having the sounds khw, ch having the sounds tsh and j having the sounds dzh. Another method of classification which is not so detailed is to distinguish between voiced and voiceless consonants and between "stop-plosive" and "continuant" consonants. "Stop-plosive" consonants are those which stop the breath completely and then continue with a minor explosion of the breath pent up by the stopping. It should be noted that, like the water hose, the pressure should be continued during the stoppage so that the release of the pressure produces an increased spurt. In the case of the consonant the increased spurt of breath should become an audible sound. An example is the pronunciation many give the single word, "what?" It often sounds like "wha?" The tongue may be raised to the roof of the mouth to form the "stop" of the t but the pressure is not continued to produce the "plosiveness" necessary to make the t audible. "Continuant" consonants are those which depend upon the following letter or sound for their termination, or, if they are final, upon the termination of breath pressure.

A little time spent experimenting with the muscles that produce the various consonants will prove that improved articulation will come only with more specific muscular

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action. Brief drills can be devised by the classroom teacher to point out to her students the increased muscular action necessary for more distinct articulation. Use of these drills at odd times during the school day, especially before recitation periods, will strengthen the necessary muscles so that their use more forcefully will become a habit. The teacher could devise a game in which individuals in the class would present some other member of the class to the class, using either that member's own name or a fictitious name made up of phonetic sounds that needed to be drilled for improvement. Such a game should help establish a habit of articulating names distinctly when making introductions. The class could take part by seeing which one could repeat the name given most distinctly or, after several names had been presented to the class, which one could name the most names correctly, and distinctly. "Good articulation is better than great volume."25

INTERPRETATION

"All directions as to the management of the voice must be subsidiary to the expression of felling."26 "The finer nuances should spring from the moment."27 "Singing

25Karr, op. cit., p. 196.
27Finn, op. cit., p. 35.
is glorified speech." These and other quotations can be found to the effect that the thought of the words is the most important element in speech and singing. Many of the classic arias were written to demonstrate outstanding vocal gymnastics, but our modern singing usually demands a meaningful text. Much of the enjoyment and appreciation is lost either in speech or singing if the thought is not clearly conveyed. More than good articulation is required for most effective singing or speaking. The feeling in the thought must be included or the sense of the words is incomplete. In each sentence some words are more important than others. The important words should be more strongly stressed either with increased volume or with a higher pitch level. Both of which require increased breath pressure or "energy surge," as Westerman calls it. Variation in the tone adds much to the effectiveness of the voice.

The author believes one of the strongest reasons for the lack of a greater appreciation for music by Americans is the habit of concert artists and opera companies of performing their music in foreign languages. To those who do not know the languages or to those who have not studied the score, the performance is mainly a vocalize, enjoyable as that may be when well done.

In the public elementary schools foreign language is

\[28\text{Westerman, op. cit., p. 135.}\]

\[29\text{Ibid., p. 58.}\]
not a problem, at least in the matter of vocal technique. As part of vocal technique it is necessary that the words of songs be made meaningful to the listener. If a class does not seem to grasp the full meaning of words it often helps to read the words over aloud, trying accents or stresses on different words, to illustrate how the meaning can be changed by a change in accent. If a song is well written the strong words will have strong or stressed notes. Father Finn says, "Put stresses and slacks in their proper places. Take tempos from the mood of the piece."\(^{30}\)

The author has visited school rooms to find classes laboring through a song with little enjoyment to themselves and much dissatisfaction to the teacher. A few moments spent determining "how the words would go if we said them" and the song became a new experience, bringing a sparkle to the eye and a smile to the lips.

CONCLUSIONS OF THE MANUAL

This chapter on "The Vocal Method" has been written to assist those who have not had special training in voice in understanding some of the general principles of vocal technique. Technical terms and details have been left to the vocal specialist, many of whom are quoted in this work. If one will employ the principles of good posture, adequate breath control, resonant tone production, distinct articulation and thoughtful interpretation until the use of these

\(^{30}\)Finn, op. cit., p. 35.
principles becomes habitual, one will find both his speaking and singing voice to be much more capable of responding to his wishes and of more favorably impressing his hearers. If the classroom teacher becomes aware of the general principles of vocal technique she will be much more competent to help her students form proper habits in the use of their voices. If each teacher, from the first grade through the last year in high school, encourages the proper vocal habits in all recitations and other vocal activity, only a very little extra attention to voice would be required of any one teacher, yet the total result would be much improved voices on the part of the coming generations.
TESTING THE METHOD

During the fall of the school year, 1950-51, an announcement was made to the teachers of the Billings, Montana, public schools that a study would be made in the first five grades to determine whether certain vocal techniques can be mastered easily by elementary classroom teachers and transmitted effectively by them to their pupils.

Fourteen teachers responded to a call for volunteers to go into the study of vocal technique. The manual\(^1\) served as the basis for this study. It was decided to spend twelve hours, two hours per week, on the project. Between meetings, the teachers practiced the exercises suggested in the manual.

Also, during the fall of the 1950-51 school year, the writer made recordings of some of the singing in the 112 classrooms in the first five grades of the Billings public schools. The teachers were informed in advance that a sampling of their music lessons would be recorded. These samplings were to include (1) a memory song by the whole class, (2) a cross section of the individual singing in the room, and (3) an example of some of the tone work.

The recording equipment used was a portable tape recorder (Brush, Sound Mirror, 1949 model). The tape used was, generally, Fidelitone Recording Tape, made by Permo,

\(^1\)Cf. supra, pp. 6-45.
Incorporated, Chicago, Illinois. A twenty-five foot cord was installed on the microphone to permit it to be carried the length of a row of seats in a classroom.

The routine of making the recordings in each classroom was as follows: (1) the writer reviewed, briefly, with the teacher and the class, the order to be followed in making the recording; (2) when all were ready, the recording began on a signal from the writer; (3) when the recording was concluded, the tape was re-wound and played back to the class.

Considerable interest was expressed in hearing recordings of other classes. As interest was also expressed in more meetings on vocal technique, a second series of meetings was scheduled during the winter. At these meetings part of the time was spent in hearing the recordings of different rooms. The writer would comment on the good vocal technique and the points heard in the recordings that might be improved. The rest of the time was spent in discussion and practice of vocal exercises.

Interest was still great enough, at the conclusion of the second series of meetings, to warrant a third series in the spring.

Also, in the spring, a second round of recordings was started. Time permitted the second recording of only eight of the ten elementary schools.

During the summer of 1951, the fall and spring recordings, of those rooms that had been recorded twice, were
spliced together. Comparisons of the fall and spring recordings led to no definite conclusions. Therefore, it was decided to continue the experiment through the 1951-52 school year.

The process of the previous year was repeated, with the exception that the manual on vocal technique had been issued to all elementary classroom teachers after the second recording of the previous year. Twelve teachers, other than the fourteen teachers of the 1950-51 school year, volunteered for the special study on vocal technique.

When the fall recordings had been completed, in 1951, it was noted that some teachers who had not volunteered for the vocal study were getting outstanding results with voices of their pupils. To determine the cause for these results, a questionnaire was devised. The questions were designed to shed more light on the previous vocal training and experience of the teachers.

Figures are to be found in Appendix A reflecting the replies received to the questionnaire. The more significant information has been grouped in Figure I, page 45.

Although there were 112 classrooms below the sixth grade in the Billings public schools, the music was taught by ninety-five of the classroom teachers. Seventeen teachers exchanged another subject for music with a neighboring

*The term, "outstanding," as applied to teachers and vocal work, is intended to denote those teachers and that vocal work which are regarded by the writer as especially noteworthy.
### TEACHERS: PREVIOUS VOCAL TRAINING AND EXPERIENCE

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V. - vocal training: private, class or both
H.S. - high school chorus experience
Col. - college chorus experience
Ch. - church choir experience

Solid black bars: Outstanding non-volunteer teachers
Solid red bars: Outstanding volunteer teachers
Diagonal black bars: Average non-volunteer teachers
Diagonal red bars: Average volunteer teachers

FIGURE I
classroom teacher. Eighty-eight replies were received from the ninety-five teachers who teach classroom music.

Figure I will show the number of teachers falling in each of the categories; some had no training while others had vocal training plus chorus experience in high school, college and church. Twenty-three teachers, the largest number in any one category, are found in the grouping of greatest vocal training and experience. On the other hand, the next largest category contains those teachers who have had no previous training and experience. The remaining fifty-one teachers are distributed among the intermediate categories.

When the fourth round of recordings had been completed during the spring of 1952, all four recordings of each teacher's room were spliced in consecutive order. Recordings of similar grades were grouped together. Those recordings showing evidence of superior training in vocal technique were classified as outstanding. The rest were classified as average.

Particular attention is called to the fact that the volunteer teachers are distributed among eleven of the sixteen categories of previous training and experience. Another important fact is that ten of the twenty-four volunteer teachers* became outstanding in their success with the

*Two volunteers were among the seven of the ninety-five classroom teachers who did not return answers to the questionnaire mentioned on page 8, hence could not be listed in the categories.
voices of their pupils. This fact becomes more important when the observation is made that but seven of the sixty-four non-volunteer teachers produced comparable results. Of the seven outstanding non-volunteer teachers, five are to be found in the category of greatest previous training and experience. Another has a total of four years of private and class training in voice.

Comparisons of the recordings made during the year 1950-51 with those of the year 1951-52, when the manual on vocal technique had been issued to all teachers, show vocal improvement in most classes the second year. This is particularly noticeable among the outstanding volunteer teachers. Of the ten outstanding volunteer teachers, eight were members of the 1950-51 study group. The 1951-52 volunteers had not completed their study when the last recordings were made. Observation of the success of the 1950-51 volunteers indicates that the 1951-52 volunteers will be more successful next year, when they start the school year with the full knowledge of the study on vocal technique.
OPINIONS OF TEACHERS

In order that the teachers who volunteered for the study of vocal technique might express themselves more candidly regarding the study, Dr. Charles D. Dean, Assistant Superintendent of the Billings Public Schools, was asked to make a survey of their opinions. He asked them to answer the following two questions:

1. Has this new vocal technique been a help to me personally? Describe how.

2. Have I been able to achieve better results in the improvement of pupil's voices under this technique than under the technique I used previously?

Twenty-four replies were received from the twenty-six teachers who volunteered. Twenty-three were favorable and one answered that the study was "not much help" either to her or to her pupils. Of the twenty-three favorable replies, all were agreed that the study was helpful both to them and to their classes. Nine mentioned that the study had improved their breath control, enunciation and tone quality. Two teachers cited an increased vocal range as one benefit of the study. Six teachers said, in effect, the study had given them an awareness of voice they had not had previously. Four teachers were sure they had a "better

\[\text{Cf. Appendix B.}\]
understanding of the voice" than they had had before the study. Three teachers felt the study had given them "valuable ear training." Six teachers pointed out that the study had given them "confidence," which they had lacked in teaching music. Another teacher said the study "had given me a completely changed attitude toward the teaching of music." One teacher was sure the study had strengthened her formerly weak voice. Two teachers were happy that they no longer suffered from vocal fatigue at the end of the school day.

In answer to Dr. Dean's second question regarding the opinion of the teachers' success in achieving better results with the voices of their pupils, ten teachers were agreed that they had been able to show progress, particularly in posture, breath control, enunciation, and tone quality.

In addition, ten teachers stated that the vocal technique had made their music classes more "interesting," "more enjoyable," "more fun," or more "stimulating." Three teachers pointed out that they now had a better knowledge of vocal objectives and the methods to arrive at those objectives. Five teachers were sure they were now more effective in reducing the number of monotones in their classes. One teacher felt the vocal study brought about improvement in other subjects, particularly subjects requiring reading aloud. Two teachers stated they were sure the study should be taken up by more teachers. A new teacher was confident she "would get better results next year."
From the foregoing quotations and paraphrases from the evaluations made by the teachers, it is evident the teachers believe the study was effective.
CONCLUSIONS AND RECOMMENDATIONS

Even recognizing limitations of the experiment, the writer is convinced that the results obtained justify the extra effort and that the technique taught is successful. The writer found that 41.25 per cent of the volunteer teachers were producing superior results in the improvement of the voices of their pupils compared to similar results being produced by but 10.9 per cent of the non-volunteer teachers. The distribution of the volunteers among eleven of the sixteen categories of previous training and experience would indicate that neither previous training nor the lack of it has any significance.

Twenty-three of the twenty-four volunteer teachers believed the study had helped them in the use of their own voices and in their ability to train the voices of their pupils.

A comparison of the success of the volunteer teachers and the non-volunteer teachers clearly indicates that a far greater proportion of elementary classroom teachers will be effective in the development of the voices of their pupils, if given an opportunity to make a short study of basic vocal techniques.

Therefore it is recommended that a study of basic vocal techniques be made available to all elementary class-
room teachers. As it is the belief of the writer, substantiated by much of the authority listed in the Bibliography, that the five fundamentals employed in the experiment reported here are the basic minimum in vocal technique, it is further suggested that these five fundamentals be included in any program of vocal instruction for elementary classroom teachers.
APPENDIXES
APPENDIX A

QUESTIONNAIRE TO TEACHERS

REGARDING BACKGROUND IN VOCAL TECHNIQUE *

In order to better evaluate our recordings we need information regarding the training and experience of our classroom teachers in vocal technique. Kindly fill out the following:

(Leave blank if the answer is "No")

1. I have had private lessons in singing _____ years.

2. I have had class lessons in vocal technique _____ years.

3. I have sung in the following groups:

   High school chorus _____ years.

   College chorus _____ years.

   Church choir _____ years.

*The questionnaire reproduced here is that part of a more extensive questionnaire which is pertinent to the experiment. The following two Figures reflect the information received in the answers to the above items.
TEACHERS' CHORAL EXPERIENCE

CHURCH

CHOIR

COLLEGE

CHOORUS

HIGH

SCHOOL

CHORUS

Number of teachers

FIGURE II
APPENDIX B

LETTER TO TEACHERS REQUESTING EVALUATION OF VOCAL TECHNIQUE

BILLINGS PUBLIC SCHOOLS
OFFICE OF THE ASSISTANT SUPERINTENDENT

March 18, 1952

Dear Fellow Teacher:

Mr. Cutts has asked that I assist him in getting an evaluation of his work in vocal technique classes. He feels that it is quite possible that he will be able to get a truer evaluation if someone else asks for the information than if he asks for it. I am happy to assist him in this most worthy project.

Will you in turn help by making your evaluation in which you consider the following two points?

1. Has this new vocal technique been a help to me personally? Describe how.

2. Have I been able to achieve better results in the improvement of pupil's voices under this technique than under the technique I used previously?

Thanking you for your assistance, I am

Sincerely,

Charles D. Dean
Assistant Superintendent

P.S. Will you hand your sealed, unsigned evaluation sheet to your principal and ask that it be placed in my box?
BIBLIOGRAPHY


American Academy of Teachers of Singing, Reasons for Studying Singing, a pamphlet, New York, n.d.


