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An Experiment in Teaching Sight Reading by Shaped Notes

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AN EXPERIMENT IN TEACHING SIGHT READING BY SHAPED NOTES

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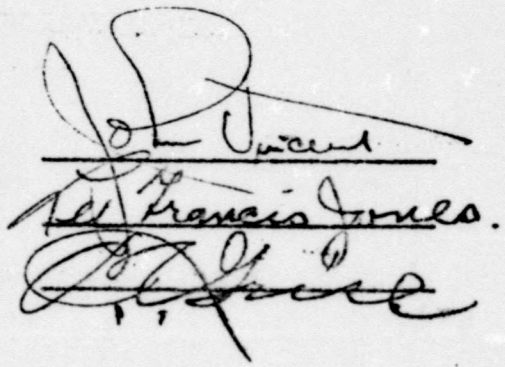

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PREFACE

The author wishes to acknowledge here the assistance received from time to time in bringing the study to its present form. Appreciation is expressed especially to Dr. John N. Vincent, Head of the Music Department, Western Kentucky State Teachers College, Bowling Green, Kentucky, under whose direction the work was begun and carried to completion, for the scholarly advice and help given so generously throughout the progress of its preparation.

Appreciation is expressed also to Mr. Louis H. C. Laukhuf, Superintendent of the Maysville City Schools, Maysville, Kentucky, for the use of records and files in his office, and to the four public school teachers for their cooperation in the carrying out of the experimentation: Miss Elizabeth Litsey, Miss Mabel Dye, Mrs. John Quertermous, and Mrs. Margaret Ripley.

CHAPTER I

INTRODUCTION

A. The Problem

The purpose of this study is to make an attempt to apply in the elementary grades of the public schools the principle of shaped notes with the purpose of fostering sight reading.

B. Need for the Investigation

Music educators have been conscious of the importance of the teaching of sight reading in the elementary grades for many years. During the fourteenth annual session of the Music Supersisors' National Conference held at St. Joseph, Missouri in April, 1921, the conference recommended a summary of musical accomplishments as a standard of attainment for the end of the sixth year of school. The exact accomplishment that has bearing on this study reads, "Every child shall have developed aural power to know by sound that which he knows by sight and vice versa; every child shall have acquired the ability to sing at sight, using words, a unison song of hymn-tune grade, and the easiest three-part songs; these are to be in any key; to include any of the measures and rhythms in ordinary use; to contain any accidental signs and tones easily introduced."[1]

Such an objective has been recognized by music educators, and a conscious attempt has been made to realize this aim. However, average boys and girls after several years of public school

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1. "Music Supervisors' Research Council Bulletin Number One," Music Supersisors' National Conference Yearbook, (Chicago, Music Supervisors' National Conference, 1921), p. 8.

music cannot sing with any degree of ease a fairly simple song at sight.

The nation-wide survey[2] of public school music made by the research council of the National Music Supervisors' Conference in 1927 revealed that the skill of sight reading had not been acquired to any great extent. The Kwalwasser-Ruch Achievement Test was used. A summary of the results that have direct bearing on this study are:

a. The acquirement of musical knowledge is unsteady and irregular;

b. The skill of reading from notation is not acquired by grade children to any great extent;

c. There is a certain reflection of discredit on music pedagogy since acquisition is so slow;

d. Notational knowledge is acquired twice as fast in the primary grades, one to four, as in the upper grades, five to twelve;

e. Teaching methods up to 1927 were not sufficiently refined to insure the realization of many of the aims formulated by the Music Supervisors' National Conference for the past thirty years.

The study revealed further that fourteen percent of all high-school pupils do not know that "do" is the first note of the scale.[3]

The inability of the boys and girls of sixth-grade level in the community where the writer teaches to sight read a fairly

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1. Music Supervisors' National Conference Yearbook, 1927, pp. 123-127.
2. Ibid., p. 127.

simple song confronted the author of this work. There are, however, in this section people coming from rural communities who have learned to sing by the use of shaped notes. Several of the choir members in various churches have had experience in sight reading by the use of this particular system of notation. These individuals proved to be the best sight readers in the group, and this was a challenge to the writer, who subsequently sought an opportunity to engage in an experiment to see if by use of the shaped notes in the public school room, sight reading could be fostered. The attitude of the experimentor was not to prove that shaped notes were superior to ordinary notation of learning, but to throw some light on this puzzle that had presented itself. Could there be any "magic" in the shaped notes?

C. Historical Background

1. Background of solmization.- The term solmization implies the construction of the musical scale by means of certain syllables, so associated with the sounds of which it is composed as to exemplify both their relative proportions and the functions they discharge as individual members of a system based upon fixed mathematical principles.[1]

Such a naming of the degrees of the scale is not new. The laws of solmization first appeared among the Greeks in the eleventh century.[2] The Guidonian[3] syllables, ut, re, mi, fa, sol, la, were taken from the initial syllables of a hymn to St. John

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1. Sir George Grove, Dictionary of Music and Musicians, Vol. 4 (New York, Macmillan, 1938), p. 806.
2. Ibid.
3. W.S. Pratt, The New Encyclopedia of Music and Musicians (New York, Macmillan, 1929), pp. 182-186.

the Baptist:

"Ut Sueant laxis,
Resonare fibris,
Mira gestorum,
Famuli tuorum,
Solve polluti,
Labii reatum,
Sancte Johannes."[1]

These syllables were used for the successive tones of each of the hexachords as devised by Guido d' Arrezzo.[2] The short step or semitone was always mi-fa just as it remains in our present eight-tone octave series of tones. During the sixteenth century the octave concept or heptachord plan came into use, and "si" was added as a seventh tone of the major scale. About 1673 "do" was suggested in place of "ut", probably because it was more euphonious.

Thus the do re mi fa sol la si solmization developed and has continued in use to contemporary times. The original principle of the syllables was to designate tones and intervals in the abstract, without regard to absolute pitch.[3] However, when they were applied to the scale degrees, the tendency was to treat the syllables as names for those particular tones. This method of solmization is known as the "fixed do" system.

The opposite of such a system, i.e., when the syllables apply to the tones of the major scale, is the "movable do" system. This system is in use in the United States and England. The "fixed do" system is still used in most of the countries of

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1. Groves, op. cit., p. 804.
2. Howard D. McKinney and W. R. Anderson, Music in History (New York, American Book Co., 1940), p. 125.
3. Pratt, op. cit., pp. 420-423.

continental Europe and in Latin America.

From time to time many changes in the nomenclature of the scale have been advocated but have had little effect. The most significant change in the system was that proposed in 1746 by an anomyous member of the Roman Academy,[1] which provided for the representation of sharps and flats by the adoption of five more syllables. These syllables, pa, bo, tu, de, no, were supplanted later by a system which changes the vowel sound to i for a sharped note and to e for a flatted note. The syllables for the ascending chromatic scale would then be do, di, re, ri, mi, fa, fi, sol, si, la, li, si, do; and of a descending chromatic scale: do, si, se, la, le, sol, se, fa, mi, me, re, re, do. Both of these scales have awkard repetitions; this difficulty was destroyed by the substitutions in the Tonic-Sol-Fa System[2] of ti for si, and te as the flat syllable, and of rah for the flat re.

In England the system of solmization developed is called the Tonic Sol-fah system. Its leading principle is that of key relationship, expressed in the word "tonic", and it enforces this by the use of the ancient sound names, do, re, mi, etc.

John Curwen[3] (1816-1880), was the promulgator of this system, which in reality grew out of his adoption of a plan of "Sol-fah-ing" with a letter notation, which was being used with success for teaching children some years before by a lady living at Norwich. Curwen always spoke of this lady, Miss Elizabeth Glover, as the originator of the method.[4]

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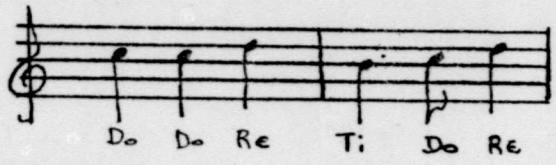
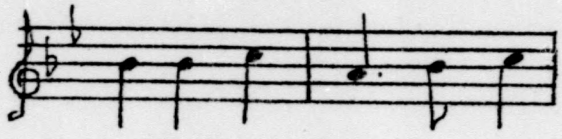
1. The International Cyclopedia of Music and Musicians, ed. Oscar Thompson (New York, Dodd, Mead Co., 1939), p. 1749.
2. Groves, op. cit., Vol. 5, pp. 358-362.
3. International Cyclopedia of Music and Musicians, ;. 396.
4. Groves, op. cit., p. 368.

The argument for adhering to the old tonic use of the syllables rests broadly on the ground that the same thing should be called by the same name. For example

If this  should be called by

the syllables indicated, then



should be called by the same name. The effect upon the average ear is the same, even though the keys differ.

The great object in the professional life of John Curwen was to spread music reading among his people in England. The practice of Tonic-sol-fahing was quite widespread in England, and great choral groups have developed through the use of it.[1]

2. Background of shaped notes. - The "fasola" system of singing belongs to the hilly and mountainous regions of the southern states of America. The term,"fasola", is not to be found in any dictionary, but a real country person of mature years who has lived in such a section as above mentioned can tell one about the fasola "all-day-singin'-and-dinner-on-the-grounds." The story of their strange notation, music theory, singing schools, teachers, and song books is a fascinating one.

The term,"fasola", throws some light as to the origin of the system. It is made up of the names of the three musical

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1. Ibid, p. 362.

notes with which the common major diatonic scale began in the time of Queen Elizabeth. In those times the original ut, re, mi, fa, sol, la, si sequence and other devices of note singing had been gradually changed to the three syllables, fa, sol, and la, with mi added as a rare melodic emergency. To fill out the seven notes of the major scale octave the English sang, ascending, fa sol la, repeated them for the next three notes, and then added mi as the "leading" tone to the coming fa which completed the octave. Thus the familiar do, re, mi, fa, sol, la, ti, do was sung fa, sol, la, fa, sol, la, mi, fa in Shakespeare's England, and is still so taught and practiced among those who belong to this lost tonal tribe in America.[1]

New England seems to have been the place where Old England's manner of solmization entered America. Singing schools sprang up about 1771.[2] Though it grew to be a national institution, the singing school remained from the first to the last a private enterprise. The teacher organized his own classes, which were usually held at night, taught them, and collected his modest fees.[3] During the daytime he worked at some other occupation.

The singing-school teachers always attempted to find "helps to read." Thus they concluded that a system of giving to each note-head a characteristic shape -- one that would reduce the reasoning and reckoning processes by showing instantly that the note in question was fa, sol, la, or mi, leaving the singer to employ all his melodic feeling -- would simplify his learning

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1. George Pullam Jackson, White Spirituals in the Southern Uplands (Chapel Hill, University of North Carolina Press, 1933), p. 4.
2. Ibid., p. 7.
3. Edward Bailey Birge, History of Public School Music in the United States (Boston, Oliver Ditson Co., 1928), p. 12.

to sing.[1]

The originators of the "patent notes", sometimes called "shaped notes" or "buckwheat notes",[2] is not clearly known. Some contribute the authorship to Andrew Law, a New England singing-school teacher, while others ascribe the system to the two partners in song-book compiling, William Little and William Smith.[3]

The year 1803, when Law was fifty-five years old, seems to be the date of the first appearance of shape-notation in his books.[4] Grove's Dictionary places without warrant the first appearance of Law's shapes about 1800.[5] The system as set forth by Law contained four kinds of characters to denote the four syllables, mi, faw, sol, law, which were used in singing.

A song book published in 1802 by William Little and William Smith was entitled, The Easy Instructor; or A New Method of teaching Sacred Harmony, containing the rudiments of music on an improved plan, wherein the naming and timing of the notes are familiarized to the weakest capacity. The Little and Smith notation differed from Law's system in the sequence of shapes in the diatonic scale. The Little and Smith sequence was triangle, round, square, etc., whereas Law's sequence was square, round, triangle, etc. For a comparison of the two systems of notation see Figure 1.

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1. Jackson, op. cit., p. 11.
2. Ibid., p. 3.
3. Ibid., p. 12.
4. Ibid., p. 12.
5. Grove, op. cit., American Supplement, p. 386.

Both Law and the Little and Smith partnership had claim to a "new method", for there was a decided difference between the two notations. This difference lay in the sequence of shapes and syllable-names as mentioned above.

This very four-shape notation along with an early extension of the notation to seven shapes, including the old four, is still used by thousands of singers, and its popularity remains today over vast stretches of the United States.[1]

There has been for a long time a conflict between the "educated" musician and the singing-school product, between the country-bred and the city-bred, and between the singing school and the conservatory over the relative advantages of the shaped notes versus the conventional musical notation of today.

Now a few conservatory and college-trained musicians have been disturbed by coming in contact with country singers who in using shaped notes proved to be far superior to the pupils trained in conventional solmization.

Having experienced this, the writer was inclined at first to discount the shaped-note method as being worthy of attention, but repeated contacts forced him to give some thought, and as a result he began to wonder if there could be some hidden merit in this singing-school practice which might have meaning as a teaching device to one interested in fostering good sight reading. Any promise of aid in this direction seems worthy of attention in the light of the aims of public school music and the actual outcomes.

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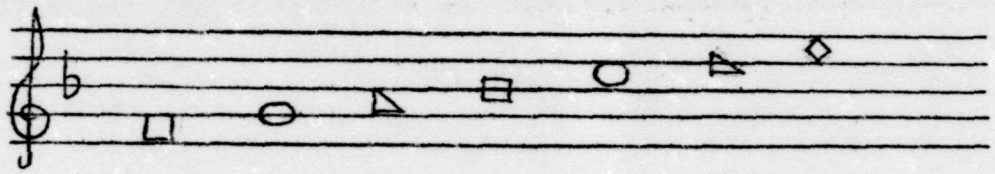
1. Jackson, op. cit., p. 15.

Little and Smith:

FA SOL LA FA SOL LA MI

Andrew Law:



FA SOL LA FA SOL LA MI

FIGURE 1. - COMPARISON OF THE LITTLE AND SMITH AND LAW SYSTEM OF NOTATION

D. Previous Related Studies

There have been many investigations made as to the values received from a practice of solmization, several of which are pertinent to a further understanding of the present study. In no case, however, has the writer found an attempt made to improve or alter the existing system of solmization. The efforts of the investigators have only yielded criticisms of the present use of solmization.

A significant attempt was made in 1939 by Harry A. King[1] to find the factors that contribute to music-reading disability. The hypothesis of the investigation was that certain aspects of visual and auditory abilities may be contributing factors to faulty music reading. The parallel-group technique was used with fifth and sixth grade children in the public schools of Dunkirk and Fredonia, New York. Various tests were administered with the purpose of measuring music-reading skills, and to test visual and auditory characteristics. The results revealed, however, that visual and auditory anomalies were not contributing to any reliable extent to music-reading disability.

Clara J. McCauley[2] made an exhaustive study of forty state courses of study, five county courses of study, twenty-five city courses of study. She enumerated the aims, objectives, values, and outcomes found therein. A summary of all these divisions found in the courses of study revealed that the ability of sightreading music was listed more often as an aim of the program

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1. Harry A. King, "Auditory and Visual Characteristics of Poor Music Readers," Music Educators National Conference Yearbook of 1939-1940, pp. 93-97.
2. Clara J. McCauley, A Professionalized Study of School Music (Knoxville, Avent, 1932), p. 246.

of music education than any other aim except that of using the voice correctly. Such a fact shows clearly the recognition of the importance of improving the sight reading of boys and girls.

A very revealing study was the doctor's dissertation of Clel T. Silvey written in 1937. The purpose of the study was to check upon the personal reactions in respect to the degree of retention of solmization, upon which so much emphasis is placed during the first six or seven years of school.[1] The results which have direct bearing on the present study are:

1. Upon checking among students who have left elementary school and continue in music activities, solmization was rated fourth as a contributory factor in music reading.

2. Later groups, college and church-municipal choirs give even less credit to solmization. They assign it fifth place.

3. Both the representatives of the music departments in teachers' colleges and the general group of professional musicians are more likely than not to believe that solmization has a positive survival value as well as a temporary value.

4. Both of the afore-mentioned groups are prone to ascribe any apparent weakness in the procedure to its improper presentation, or to poor teaching rather than to an inherent weakness of the procedure itself.

5. When called upon specifically to criticize solmization, these two groups criticize it largely in terms of: first, its tendency to overmechanize music; second, the fault was the method by which it is presented; and third, the need for certain modifi-

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1. Clel Thurman Silvey, A Study of Personal Reactions to the Solmization Method of Teaching Music Reading. Contributions to Education, No. 193 (Nashville, George Peabody College for Teachers, 1937), pp. 66-68.

cations in its use, though the basic technique, itself, could be retained.

The implications of the various surveys and investigations of various leaders point to a lack of efficiency of some type. The lack of proper teaching and the need for certain modifications in the existing system of solmization both seem to the writer to be collateral causes of weaknesses noted.

D. Limitations of the Study

The writer fully recognizes the limitations of this study. The following are perhaps the most obvious:

1. The teaching of music reading cannot be accomplished in one school year. It is a process that embraces a period of six elementary grade-years. An attempt to teach music reading by a new system would produce only slight indications as to the reliability of such s system in one year's time.
2. Many factors contribute to the reliability of phonograph recordings as a valid means of checking the results. Such elements as nervousness on the part of the subjects, mechanical defects of the recording instrument and record blanks, and the variations in the performance of the groups from day to day tend to affect the quality of the recordings.
3. Without doubt the group had had many types of previous musical training. Poor habits and misconceptions of several of the subjects impeded the progress of the groups as a whole.

CHAPTER II

PROCEDURE

A. Selection of Cases

In order to secure reliable data as to the relative merits of the shaped-note system as a means of teaching sight reading over the conventional solmization method, four groups were selected. The first two groups, which we shall call Group IA and Group IB, were composed of third-grade students. This specific grade was chosen as a basis for comparison since no previous training of sight reading had been done with these children. The two groups were both heterogenous, containing approximately the same numbers, and were of average ability. Group IA was the control group,and Group IB was the experimental group.

By the sixth grade an ability for sight reading should have been developed. Therefore two sixth grades were chosen for this experiment. Group IIA was the control group and Group IIB was the experimental group. As before, these groups were heterogenous, contained approximately the same numbers, and were of average ability.

B. Beginning Test

Since the pupils in the third grades had had no previous sight-reading training other than a knowledge of a few elements necessary for music notation, no beginning test of sight reading was made for Groups IA and IB.

A test was administered to Groups IIA and IIB at the beginning of the experiment in October, 1943. A group of easy sight-reading songs in the keys of E flat, B flat, A, and C were chosen for the test. Books were in the hands of the pupils. Questions were asked

by the examiner as to the key of each song and rhythmical problems contained in each song.

A jury of three local musicians was present, equipped with rating sheets, to serve as a board of evaluation of the abilities of the tested groups. They constituted a representation of expert opinion as to the existing condition of sight reading of the groups in question. A summary of the results of evaluation and a copy of the rating sheet will be found in Table I, page16.

A phonograph recording was made of the singing of these songs. The children sang with great difficulty, and many were unable to even follow along with the music reading. Two songs were recorded, but the results showed an unintelligible jumble of sound, evidencing that the boys and girls were unable to sight read a simple song. The summary of the evaluation by the jury present substantiated this fact as all questions were answered in the negative, showing that an ability to sight sing had not been exhibited.

C. Experimental Method

The conventional solmization of do re mi was an octave system based on the relation of one note to another. The object of such a system was to give the Guidoniann singable names of the eleventh century to each of the octave notes. These syllables can then be learned and serve as a partial mnemonic device for relating the various degrees to do, and to a somewhat less degree, relating any one degree of the scale to any other or all others. (Therefore a "re" feeling is developed, as is a "sol" feeling, etc.)

The weakness of such a system is that all the scale degrees from the mnemonic angle have the same value, whereas, actually in

TABLE I

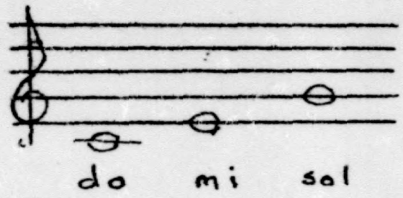
FIRST EVALUATION BY A LOCAL JURY

COLUMN I	COLUMN II*			
	Group IIA		Group IIB	
	Yes	No	Yes	No
1. Do the children sing with accuracy?		3		3
2. Are they conscious of key relationship?		3		3
3. Do they sing rhythmically?		3		3
4. Has an ability to sight read been acquired to any great extent?		3		3

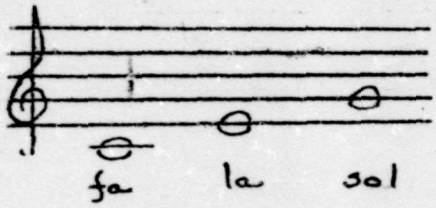
* The figures in Column II refer to the frequency of items checked by the three evaluators.

a system such as ours, depending on tonality, certain internal relationships make certain degrees far more important than others.

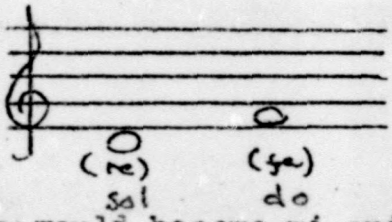
In an attempt to recognize and make use of the important tonal degrees, while retaining the good points of the conventional solmization, the author decided to make a compromise between the Guidonian octave syllable-names and the syllables of the fasola singers. This fasola system divides the octave by tetrachords, conjunct and disjunct, as recognized by Phythagoras in his tetrachord theory. But realizing that do mi sol has become, in contemporary life, an almost univeral tonic chord designation, it was decided to retain this:



This is more intelligible to the average musician than fa sol la of the fasola system:

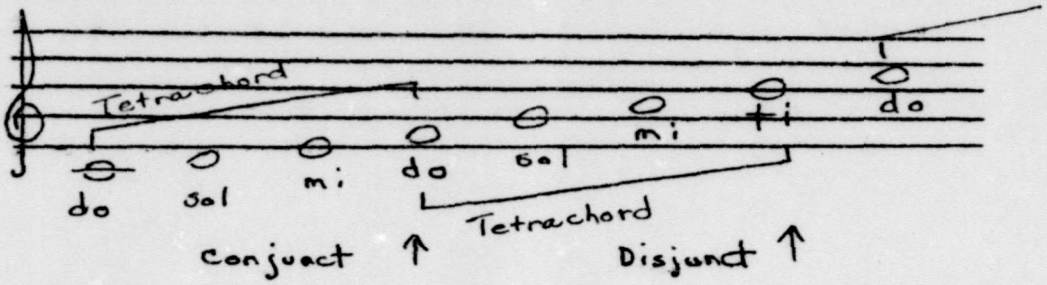


Still adhering to the tetrachordal idea, the use of such a tonic chord would force one to substitute sol for the traditional re and do for traditional fa:

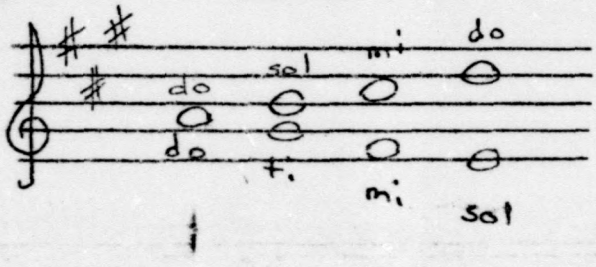


Traditional la would become mi, and the extra note, the seventh degree of the scale, called by the fasola singers mi is better rendered by the syllable ti since its meaning is more clear to

the conventional solmization. This will give a scale as follows:



Conventional public school music, using the logical presentation, has undertaken to teach the scale from do up to octave do, (usually in E or E flat major), thus making eight relationships as the initial objective. This is a considerable strain on the memory of the child. A simpler presentation is possible with the tetrachord solmization, where we place tonic do in the middle, (for example, in B flat or A major), and teach the tetrachord above and below:



For a comparison of the two system see Figure 2.

Thus the experimental method used for the teaching of Groups IB and IIB contained two major differences from the conventional method of solmization used with Groups IA and IIA. First, the nomenclature of the scale was do, sol, mi, do, sol, mi, ti; and second, shapes were used for the purpose of immediate recognition of the note in question. Later, the use of the shaped notes would be discontinued when aural habits had been thoroughly established. (It will be clear that relative up or down melodic motion must

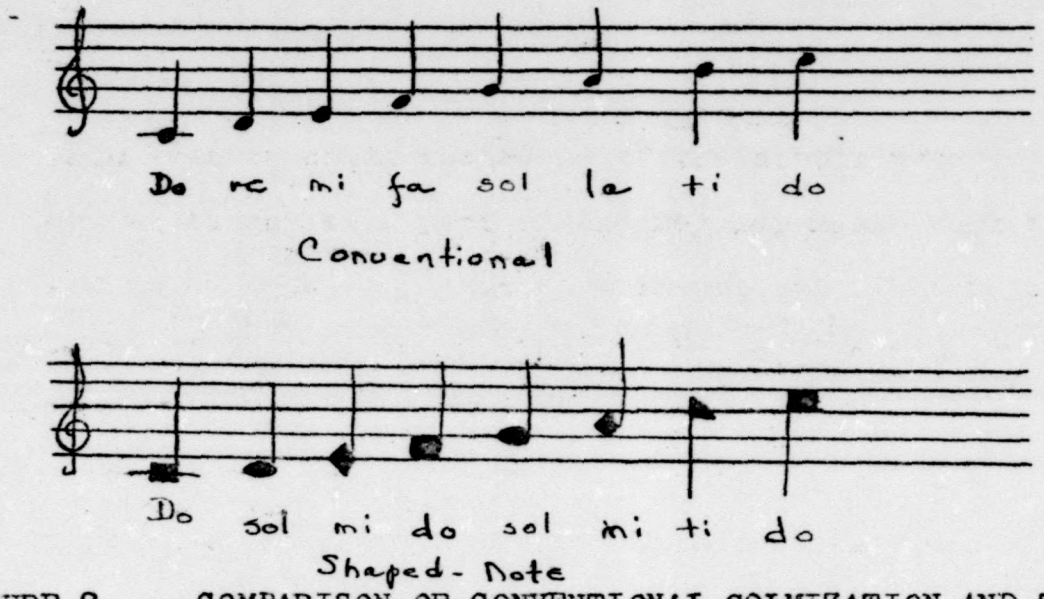


FIGURE 2. - COMPARISON OF CONVENTIONAL SOLMIZATION AND THE EXPERIMENTAL METHOD OF SOLMIZATION

(For the purpose of comparison, the syllable-degrees common to both, are in red ink. In class room presentation no such color scheme is advocated.)

always gave been noted by the students of the tetrachordal system, and this would result in a positive transfer to conventional notation.) The use of the tetrachordal solmization would be continued. There would be no necessity for any change to the usual system, since it is a teaching device, and, it might be added, a very qaestionable one, if one is to judge from the results.

D. Teaching Procedure

From October until the close of the school year in May, sight reading was taught as a part of the regular music work with the four groups selected for this experiment. As sight reading is but a part of the course of study in Music Education in the elementary grades, only a portion of the music period was used for the purposes of sight reading. This experiment was to determine what gains could be accomplished with the use of a new system of solmization in a natural situation. The music periods, thirty minutes in length, were held thrice weekly. An average of ten minutes of each music period was devoted to sight reading.

Group IA, the control group of third graders, was taught sight singing by use of the conventional solmization. The observation song method[1] was used. A very simple song was chosen for the beginning of the study. This song contained the problem of the tonic chord. Other problems were isolated in observation songs and were incorporated in the study. The key of E flat was used first. As the group advanced in ability, other keys were

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1. George Hubbard, Music Teaching in the Elementary Grades (Chicago, American Book Co., 1934), p. 91.

introduced.

Rhythmical problems were emphasized. Much stress was placed upon the correct duration of various notes.

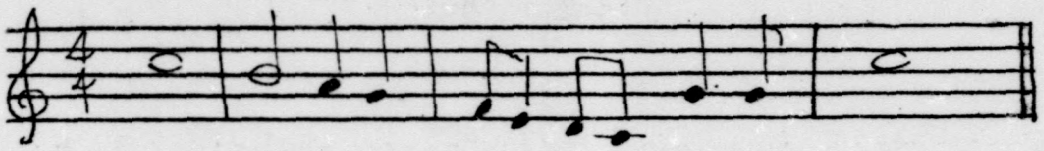
For Group IB, the experimental group of third graders, the procedure differed in many respects. The key of B flat was selected as a beginning key. The tetrachords above and below tonic B flat were taught at the beginning of the study. When each child had mastered the singing and recognition of this progression in various songs, the key of E flat was used for the completion of the scale. Some of the songs used were mimeographed, using shaped notes for quick recognition purposes. Other songs and exercises were placed on the blackboard, written with the experimental shaped notes.

Rhythmical problems were stressed. The shaped notes still retained their duration values. See Figure 3 for a comparison of rhythmical examples in both systems.

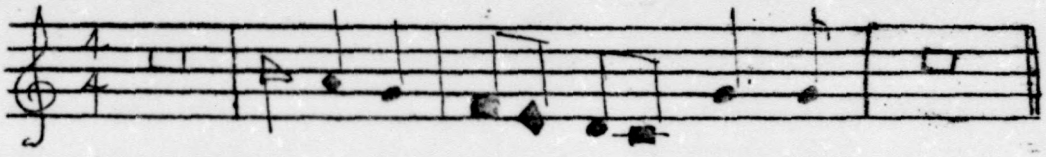
Many keys were used for sight reading with Group IB. The use of the shaped notes, readily showing the syllables, eliminated the confusion experienced without some guide as to the names of the syllables. The songs used for both Group IA and Group IB were the same.

After testing Groups IIA and IIA, it was found that good sight reading had not been attained, and a review of all musical elements necessary for sight reading was made.

Group IIA engaged in a review of the elements of key recognition, rhythmical problems, tonic chord feeling, scale singing, and intervals of the scale. Reading songs, found in various books, were used as materials.



Conventional Solmization



Shaped-Note System

FIGURE 3. - COMPARISON OF RHYTHMICAL EXAMPLES IN BOTH SYSTEMS

For Group IIB the procedure closely resembled that used with Group IB. A thorough review of elements mentioned above was necessary. All songs used by Group IIA were used by Group IIB. In the case of the latter, the songs used were mimeographed or placed on the blackboard, written in the experimental shaped notes.

E. Concluding Test

At the conclusion of the school year, the four groups were tested in order to measure the progress of the various groups and to draw comparisons within these four groups.

The jury of three local musicians that had witnessed and evaluated Groups IIA and IIB at the beginning of the study were present for another evaluation of the progress made. Again, the same list of questions used for the evaluation made in October was used as a check-list. See Table II. The following results were obtained:

1. All questions were answered positively for Groups IB and IIB, the experimental groups.
2. All questions were answered alike for Groups IA and IIA, the control groups. Questions 1, 3, and 4 were answered in the negative. Question 2 in both cases was answered in the affirmative.

Another recording was made of all the groups. The same songs were presented to the two sixth grades to sing at sight for the recording. None of the children had seen the songs before. Only the questions of the key and meter were considered before the making of the recording.

Another selection of songs was used for the third grades.

TABLE II

SECOND EVALUATION BY A LOCAL JURY

COLUMN I	COLUMN II*							
	YES IA	NO	YES IB	NO	YES IIA	NO	YES IIB	NO
1. Do the children sing with accuracy?		3	3			3	3	
2. Are they conscious of key relationship?	2	1	3		3		3	
3. Do they sing rhythmically?		3	3			3	3	
4. Has an ability to sight read been acquired to any great extent?		3	3			3	3	

* The figures in Column II refer to the frequency of items checked by the three evaluators.

Again, the children were using new material, songs they had never worked with before. Only the questions of key and meter were discussed before the making of the recording.

CHAPTER III

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

A. Evaluation by a Jury of Experts

The recordings made of all four groups at the conclusion of the study in May, together with the recordings made in October of groups IIA and IIB were submitted and played for a jury of music experts for the purpose of evaluation. Three faculty members of the music department of Western State Teachers' College were asked to serve on this jury of evaluators. We shall designate these three as Mr. X, Mr. Y, and Mrs. Z.

A checklist was prepared with provisions for checking the groups as to intonation, unanimity, tone quality, rhythm, and sureness. Space was also provided for individual comments of the music heard. A reproduction of the factors checked is to be found in Tables III, IV, and V.

B. Summary of Evaluation

1. Intonation.- There is much disagreement among the three jurors as to the factors checked. Mr. X rated Group IA poor in intonation and rated Group IB good in intonation. Mr. Y rated Group I poor in intonation, but Group IA was rated excellent. Mrs. Z rated Group IA very poor in intonation, and Group IA was rated poor in this respect.

Such an evaluation had but one fact in common among the three jurors. This fact was that Group IB in every case was rated above Group IA. Thus the experimental group, using shaped notes, was rated above the control group, using conventional solmization, by all three jurors as to intonation.

TABLE III

RATING SHEET OF MR. X

	May IA		May IB		Oct. IIA		May IIA		Oct. IIB		May IIB	
A. INTONATION												
1. Excellent												
2. Good				x						x		x
3. Poor		x										
4. Very Poor						x		x				
B. UNANIMITY												
1. Excellent												
2. Good												x
3. Poor				x						x		
4. Very Poor						x		x				
C. TONE QUALITY												
1. Excellent												
2. Good				x								x
3. Poor								x		x		
4. Very Poor						x						
D. RHYTHM												
1. Excellent												
2. Good												
3. Poor				x						x		x
4. Very Poor		x				x		x				
E. SURENESS												
1. Excellent												
2. Good												x
3. Poor				x						x		
4. Very Poor		x				x		x				

TABLE IV

RATING SHEET OF MR. Y

	May IA	May IB	Oct. IIA	May IIA	Oct. IIB	May IIB
A. INTONATION						
1. Excellent		x				x
2. Good						
3. Poor	x			x	x	
4. Very Poor			x			
B. UNANIMITY						
1. Excellent						x
2. Good		x				
3. Poor				x	x	
4. Very Poor	x		x			
C. TONE QUALITY						
1. Excellent		x				x
2. Good						
3. Poor	x			x	x	
4. Very Poor			x			
D. RHYTHM						
1. Excellent		x				x
2. Good						
3. Poor						
4. Very Poor	x		x	x	x	
E. SURENESS						
1. Excellent		x				x
2. Good						
3. Poor				x	x	
4. Very Poor	x		x			

TABLE V

RATING SHEET OF MRS. Z

	May IA	May IB	Oct. IIA	May IIA	Oct. IIB	May IIB
A. INTONATION						
1. Excellent					x	x
2. Good					x	x
3. Poor		x		x		
4. Very Poor	x		x			
B. UNANIMITY						
1. Excellent						
2. Good					x	x
3. Poor		x		x		
4. Very Poor	x		x			
C. TONE QUALITY						
1. Excellent						
2. Good		x				x
3. Poor				x		
4. Very Poor	x		x			
D. RHYTHM						
1. Excellent						
2. Good						
3. Poor		x			x	x
4. Very Poor			x	x		
E. SURENESS						
1. Excellent						
2. Good					x	x
3. Poor		x		x		
4. Very Poor			x			

Furthermore, Group IIA, the control group, was checked by Mr. X as showing no improvement from October to May. Mr. Y showed that Group IIA advanced only one degree from a rating of very poor to a rating of poor from October to May. Mrs. Z agreed with Mr. Y as to the small progress of Group IIA from October to May. Therefore, the control group in two cases appeared as poor after one year's word with the conventional solmization, and in the third case it showed no improvement at all, still showing a rating of very poor at the conclusion of the year.

Group IIB, the experimental group, was rated by Mr. X as good in October and also good in May. Mr. Y rated Group IIB poor in October but excellent in May, showing great improvement. Mrs. Z rated Group IIA good in October and good in May, agreeing with Mr. X that no improvement was made. From the ratings of the jurors it is evident that the experimental group, using shaped notes, in no case exhibited a retardation at the end of the year. In two cases there was no advancement, but in one case there was great advancement. The groups did not fall back in any case of evaluation.

In respect to pitch sight reading, with which this study is primarily concerned, the groups using shaped notes either progressed or remained the same in the opinion of the jurors. In no case was there a rating given at the conclusion of the study lower than that given at the beginning of the study.

2. Unanimity. - The ability to sing together, as a group, was checked by the jurors,and a summary of the items checked reveals disagreement among the evaluators. Mr. X found Group IA very poor at the conclusion of the school year after Group

IA had been taught the conventional solmization, and Group IB had been taught the shaped-note system of sight reading. In all three instances the jurors rated the experimental group above the control group.

Mr. X did not see any improvement in respect to unanimity, rating Group IIA very poor in October as well as in May. He did see improvement with the experimental group, however, rating Group IIB poor in October but good in May. Mr. Y saw improvement in the control group of sixth graders, rating them very poor in October and poor in May; but with the experimental Group IIB, the improvement was greatest, Group IIB being rated poor in October and excellent in May. Mrs. Z rated Group IIA very poor in October and poor in May; she found Group IIB good in October and excellent in May.

From the foregoing results it is clear that the groups using the shaped notes, Groups IB and IIB, were judged as showing improvement in one year's time. In no case were Groups IA and IIA, the groups using conventional solmization, judged above Groups IB and IIB.

3. Tone quality. - Mr. X judged Group IB good and Group IA poor in the matter of tone quality. Group IIA was judged very poor in October and poor in May, only exhibiting one degree of improvement. Mr. X also found that Group IIB improved from a rating of poor to a rating of good at the conclusion of the study.

Mr. Y found that Group IB was excellent in tone quality at the conclusion of the school year, while Group IA was poor in tone quality at this same time. He also found that Group IIB was excellent in May, while it had been poor in October. Group

IIA was found to be poor in May, advancing a slight bit from its rating of very poor in October.

Mrs. Z. judged Group IB good in May, while Group IA was only rated as very poor at the same time. She found that Group IIA advanced a slight bit, receiving a rating of very poor in October and a rating of poor in May. Mrs. Z found that Group IIB was good in tone quality in May but gave no rating as to its ability in October.

The conclusion can be drawn from the above evaluations that in tone quality the groups using shaped notes, Groups IB and IIB, were rated above the control groups using conventional solmization. In no case was a lower rating given to the experimental groups.

4. Rhythm. - Mr. X rated Group IB one degree better than Group IA in respect to rhythm. Group IB was rated poor, while Group IA was rated very poor. He did not see any improvement from October to May with Group IIA, rating this group very poor. He did not see any improvement in the experimental group, rating this group poor in rhythm.

Mr. Y found a great improvement in the case of Group IB over Group IA. Group IB was found to be excellent in rhythm, while Group IA was found to be very poor in this respect. He agreed with Mr. Y that Group IIA was very poor in both October and May; Group IIB was found to be excellent in May, while it had been very poor in October.

Mrs. Z gave no rating in rhythm to Group IA but rated Group IB poor in this respect. She agreed with the other two evaluators that Group IIA had not improved rhythmically, having rated this

group as very poor in October as well as in May. She agreed with Mr. X that Group IIB had not improved rhythmically from October to May, rating this group poor at both times.

Several facts are evident from such a summary of evaluation. There was agreement for the first time by all three evaluators that the control group, IIA, did not rise above a rating of very poor in one year's time in the matter of rhythm. Two evaluators found that the experimental Group IIB did not improve rhythmically, while one evaluator found that this same Group IIB advanced to the rating of excellent from a rating of very poor.

Since a rhythmical development was not the primary purpose of this study, these opinions do not have much significance as to the validity of the teaching of sight reading by another system.

5. Sureness. - All three evaluators found that the experimental Groups IB and IIB sang with more sureness than did the control groups. Mr. X rated Group IB poor, one degree better than Group IA which received a rating of very poor. He found that while no advancement from a rating of very poor was made from October to May by Group IIA, Group IIB advanced from a poor in October to a good in May.

Mr. Y found that the experimental Group IB was excellent as compared with the rating of very poor for Group IA. He also found that Group IIB was excellent in May, improving from a poor in October, while Group IIA was poor in May, only advancing one degree from a very poor in October.

Mrs. Z did not rate Group IA as to sureness and rated Group IB poor. Group IIB was rated good in both October and May, while

Group IIA had only advanced from a rating of very poor to a rating of poor.

It is clear from this summary of evaluations of sureness in singing that the groups using shaped notes, designated as Groups IB and IIB, in all cases did not fall below the group using the conventional solmization. On the contrary, except in the case when no rating was given for Group IA by Mrs. Z, the experimental groups were rated above the control groups by all of the jurors.

B. Written Comments of Jurors

The comments made by the jurors showed further evidence of disagreement as to a unified opinion. Mr. X's comment wan thus: "The sixth grade groups were too uneven at the beginning to verify the validity of your new system. The system is not worth the effort it takes -- for there is no carry over into musical learning -- especially in interval relationship and harmonic feeling -- especially that of dominant."

The writer does not agree with Mr. X that the sixth grade groups were uneven at the beginning of the study. A judgment formed after the hearing of a single song does not have a sufficient basis for such a statement. If the recording had been made on another day, with more and different songs recorded, the evidence might have been different to Mr. X. In the opinion of the experimentor, Groups IIA and IIB were on practically the same level of sight-reading achievement.

Mr. X's statement concerning the possible carry-over value into musical learning, especially in interval relationships and harmonic feeling is evidence of subjective judgment and inadvisable

as evidence of the value of the study one way or the other. A mere playing of the recordings of achievements of four groups does in no way set forth a "carry-over value" idea. Such a statement could only be made after this system had been tried and taught for a longer period of time.

Mr. Y's comment contained these ideas: "It would appear upon the basis of the above testing program that sight reading ability (vocal) in the late primary grades and intermediate grades can be fostered and enhanced with this system of shaped notes. The student-reaction to this specific system of notation seems to be characterized by greater security and stability of intonation -- consequently a more adequate use of the singing voice. There seems to be a definite carry-over to improvement of secondary considerations: rhythm, unanimity (eveness, ensemble), and a pleasing tone quality.

"It is my belief, however, that the testing procedure if focused on the individual, rather than the group, would allow for control of the many factors and influences inherent in the group: -- the latter being detrimental to complete accuracy of scientific experiment and conclusion."

Here was one music critic who felt that a definite improvement was exhibited by the groups using the shaped notes. He found, in contrast to Mr. X, a "definite carry-over to improvement of secondary considerations." His reaction was a positive one in favor of the new system in the light of the recordings heard, but in the light of the scope of the testing it has no more weight than the remarks of Mr. X.

Mrs. X maintained that the experiment was commendable, but the new system was not superior or usable: "I think the experiment commendable. The work has been sincere, but I do not think it superior or even usable as a system to better sight reading. The two groups were unequal to start with in my opinion. I do not think the second group showed improvement."

Again, such an opinion as to the lack of validity of this new system is evidence of judgment without evidence. It would be impossible for ome to make a statement as to the usability or superiority of a new system only used for one year. Such a length of time does not prove or disprove its value as a worthy educational device.

The newness and novelty of this system, itself, had a retarding effect. This method of solmization, termed the shaped-note method, was even new to the teacher. Many mistakes in its logical presentation and development were possibly made due to the fact that it had not been tried before. The novelty of it could in a large measure either excite the subjects to quick response or have the opposite effect. After one year of experimentation and possible trial-and-error in its teaching development, the experimentor can see more clearly how to proceed with it. It would take at least two or more years to see actual results.

C. Recommendations

The story is told of the teacher who taught Latin by two methods: one, the traditional method, and the other, a conversational method. At the end of the first semester, the students in the conversational group, having concentrated on speech forms

and usable conversation idioms, were far behind the group using the traditional method. Such a state of affairs, if put to an objective testing program after that short period, might have caused the teacher to abandon the new method as unworthy of educational values. Instead, the teacher continued until the close of the year, at which time the conversational group had caught up and far surpassed the group in traditional Latin.

From this illustration one readily understands the idea of the necessity for a continued use of any new idea (in this case the new solmization) until definite trends can have been established. If the results checked by the evaluators had been negative as to the gains made through use of the new system, or if there had been a decline in the achievements at the end of the year, it would be enough proof to abandon the use of this new system. But such a condition does not exist. In every case the jury of college professors, constituting expert opinion, marked the experimental groups as well as or better than the groups using conventional solmization.

The only claim the author makes is to the effect that all results made by the group using shaped notes were the same or better than those of the groups using conventional solmization. The system has not been disproved.

As pointed out at the beginning of this work, the need for better sight singing in the elementary grades has been recognized by music educators for many years. There has been much discussion about the reasons for the failure of the sight singing program. In many instances the blame has been placed

upon the public school music teachers. Perhaps there is justification for placing some of the blame on these individuals, but it is also possible that something could be wrong with the existing devices for teaching sight reading. In reality, solmization is merely a teaching device. Recognizing this and the failure to attain the goal sought, i. e., general ability in sight reading, it would seem that the entire matter should be subjected to closest re-examination. Therefore, the author of this work felt it worth while to investigate the existing system of solmization and to experiment with a modification of the existing do-re-mi solmization.

After one year of teaching a new system of solmization, an evaluation was made of the results. Two important factors stand out clearly among the evaluations made by a jury of trained experts. The first of these facts is that the groups trained in the new system of solmization were rated as well as or better than those trained in the conventional solmization. The second fact is that in no case did the experimental groups using the new solmization fall below the control groups trained in conventional solmization.

With these two facts in mind, the author recommends a continued use of this new system of solmization with the hope of even more definite results to be obtained at the end of a justifiable length of time.

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