

"AN EXPERIMENTAL STUDY OF THE COMPARATIVE  
EFFECTIVENESS OF HARMONIC AND MELODIC  
ACCOMPANIMENT IN SINGING AS IT RELATES  
TO THE DEVELOPMENT OF A SENSE OF TONALITY"

CERTIFICATE OF APPROVAL

PH.D DISSERTATION

This is to certify that the Ph.D. dissertation of  
by

\_\_\_\_\_   
Maria Runfola Hale  
Maria Runfola Hale

with a major in Music Education Research and  
Evaluation has been approved by the Examining  
Committee as satisfactory for the dissertation  
requirement for the Ph.D. degree at the  
convocation of

August 20, 1976

A dissertation submitted to the  
Faculty of the Graduate School of State  
University of New York at Buffalo in partial  
fulfillment of the requirements for the degree of

Doctor of Philosophy

\_\_\_\_\_  
Member  
\_\_\_\_\_  
Member

stability and inter-judge reliability were determined. Multivariate analysis of variance were employed to investigate the significance of the mean difference between

ABSTRACT

The primary problem of this study was to determine if students learn to sing songs in major and minor tonality, as an initial step in tonal conceptual development, more efficiently when only harmonic accompaniment is used as compared to the use of melodic accompaniment alone (played in octaves at the piano), followed by melodic and harmonic accompaniment together, and finally harmonic accompaniment alone. A secondary problem of the study was to investigate whether amount of instructional time influences the efficacy of a particular accompaniment method.

Two hundred twenty-four students in the Depew Public School District served as subjects in this investigation. Each of the two hundred twenty-four students was randomly assigned as individuals and not by classes, to one of eight groups for music instruction. Each of the eight groups was randomly designated to receive one of two experimental accompaniment conditions. Likewise, each of the eight groups was randomly designated to receive music instruction for twenty-five minutes either once or twice a week.

Evaluation of students' individually tape-recorded performances of each of two criterion songs, one in major mode and one in minor mode, was accomplished by two elementary music specialists. Student performance

stability and inter-judge reliability were determined. Multivariate analysis techniques were employed to investigate the significance of the mean difference between the experimental groups.

The evidence suggests that kindergarten students learn to sing songs in major and minor tonality, as an initial step to tonal conceptual development, more efficiently when their singing is accompanied by a structured combination of melody and harmony as provided with a piano than when their singing is accompanied by harmony alone. Further, it can be concluded that kindergarten students should receive a twenty-five minute period of music instruction at least twice a week.

## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	iv
Chapter	
I PURPOSE OF THE STUDY . . . . .	1
Introduction . . . . .	1
Purpose of the Study . . . . .	7
Problem of the Study . . . . .	9
II REVIEW OF RELATED STUDIES . . . . .	10
Introduction . . . . .	10
The Dittmore Study . . . . .	11
The DeYarman Study . . . . .	13
The Miller Study . . . . .	14
Comparison of Related Studies with the Present Study . . . . .	17
III DESIGN OF THE STUDY . . . . .	18
Subjects . . . . .	18
Teaching Procedure . . . . .	18
Experimental Groups . . . . .	19
Achievement Criteria . . . . .	19
Procedures for Teaching Criterion Songs . . . . .	20
Tape Recording of Achievement Criteria . . . . .	22
Evaluation of Achievement Criteria . . . . .	23
Statistical Design and Analysis . . . . .	23
IV PRESENTATION AND INTERPRETATION OF THE DATA . . . . .	28
Reliability of the Judges' Ratings and Student Stability of Performance . . . . .	28
Analyses of Achievement Criteria . . . . .	31
Interpretation . . . . .	34
V SUMMARY AND CONCLUSIONS . . . . .	38
Problem of the Study . . . . .	38
Design and Analysis of the Study . . . . .	38
Results of the Study . . . . .	39
Conclusions of the Study . . . . .	39
BIBLIOGRAPHY . . . . .	41
APPENDIX A: SONGS USED FOR INSTRUCTION . . . . .	46
APPENDIX B: SONGS USED FOR EVALUATION . . . . .	48

## Chapter I

### PURPOSE OF THE STUDY

#### Introduction

Music education has been offered in American public schools for almost a century and a half. Throughout this long and eventful history, music educators have stressed and struggled with the problem of justifying music's place in the educational system. Perhaps they have had to struggle because they had not accomplished what they intended or wanted to, or perhaps they had not yet determined what should be attempted in view of social realities.

The purpose of music in education has been a topic of controversy from earliest times as reflected in the philosophical writings of Aristotle<sup>1</sup>, Comenius<sup>2</sup>, Froebel<sup>3</sup>,

---

<sup>1</sup>Aristotle, Politics, translated by H. Rackham, The Loeb Classical Library (Cambridge: Harvard University Press, 1935), pp. 649-653.

<sup>2</sup>Johann Comenius, "The Method of the Arts", The Great Didactic, translated by M. W. Keatinge, (London: A & C Black, Ltd., 1907), Part II, pp.194-202.

<sup>3</sup>Friedrich Froebel, "Art and Objects of Art", Education of Man, translated by W. N. Hailmann (New York: D. Appleton and Co., 1887), V. D. 84 & 85, p. 229.

Edwin Gordon, Psychology of Music Teaching, (Englewood Cliffs: Prentice-Hall, 1971), p. 80.

Mann<sup>4</sup>, and Hadow<sup>5</sup>. While music educators today still differ somewhat in regard to a philosophy of music education, discerning music educators tend to agree that music should be taught for its own sake and that the purpose of music education is appreciation through understanding.

In the Psychology of Music Teaching, Gordon stresses the following philosophy:

"The general purpose of music education should be to teach for musical understanding. That is, to help students conceptualize the elements of music so that they may intelligently decide for themselves how music can best satisfy their needs."<sup>6</sup>

While there is controversy among music educators as to "why" music should be taught, there seems to be little disagreement that the music curriculum should emphasize the development of musical concepts. Current basic series and methods books espouse conceptual learning. Further, a review of professional literature

---

<sup>4</sup>Horace Mann, Eighth Annual Report of the Board of Education, "Vocal Music", (Boston: Dutton and Wentworth, 1845), pp. 117-118 and p. 136.

<sup>5</sup>William Henry Hadow, Collected Essays, "Music and Education: The Place of Music in Humane Letters". (London: Oxford University Press, 1923), pp. 272 and 279.

<sup>6</sup>Edwin Gordon, Psychology of Music Teaching, (Englewood Cliffs: Prentice-Hall, 1971), p. 60.

substantiates the attention afforded to the importance of concept development in educational programs.<sup>7</sup>

Although music educators are in general agreement as to "what" children should learn in music, they provide little specific insight into how children best develop these concepts. Gordon has emphasized the need for understanding how students learn music and has set forth a learning sequence for music based upon inferences drawn from research in the psychology of music and from general learning theory.<sup>8</sup> However, not only is there need to understand the psychological constructs involved in the music learning process but more practically there is need to determine teaching techniques which will interact with, and enhance, the music learning process.

For example, current music educators agree singing is basic to the music curriculum and the ability to sing

---

<sup>7</sup>For example, see Asahel D. Woodruff, "Concept Teaching in Music", Perspectives in Music Education, Source Book - III, (Washington, D.C.: Music Educators National Conference, 1966), pp. 219-233, and Robert G. Petzold, "A Report of the Third International Seminar on Research in Music Education", Journal of Research in Music Education, Vol. 21 (Summer 1973), pp. 99-105.

<sup>8</sup>For a detailed explanation of this learning sequence, see Chapters One and Two of Learning Sequence and Patterns in Music, by Edwin E. Gordon. (Buffalo: Tometic Associates, Ltd., 1976).

in tune is most probably a pre-requisite for learning tonal concepts. As a result, music curricula always include singing. Often piano is used to accompany that singing and other times, singing is accompanied by such instruments as an autoharp or guitar. However, little is known about the importance of these instruments, often considered standard equipment for music instruction, to the musical growth of students. A review of current methods texts reveals considerable divergence of opinion regarding the use of these instruments in general music instruction. Further, little information is given in regard to how they should be used as an accompaniment to singing. However, there appears to be a consensus that although the piano, autoharp and guitar are not absolute necessities in the classroom, they belong in a well equipped music room along with a record player, tape recorder, song bells and percussion instruments.

In a recent published text, Music in Elementary Education, there is one reference to accompaniment of singing with a guitar or folk instrument as a valuable motivating force for encouraging positive attitudes toward singing, but there is no mention of piano other than listing it as standard equipment.<sup>9</sup>

---

<sup>9</sup>Marylee McMurray Lament, Music in Elementary Education, (New York: MacMillan Publishing Co., Inc., 1976), p. 78.



Timmerman<sup>10</sup> indicates instruments are useful substitutes for an inadequate teacher's voice and outlines a procedure whereby the teacher plays the melody of each phrase on the piano followed by the children singing that phrase with accompaniment and then without. No specific indication, however, is made in regard to melody alone, melody with harmony, or harmony alone as accompaniment to singing. Cheyette<sup>11</sup> endorses use of piano accompaniment to singing and specifies melodic reinforcement until the children are familiar with the song, and then harmonic accompaniment as an aid to good intonation. Jones reports on the attributes of piano based on interviews with classroom teachers and indicates piano is "helpful in overcoming off-pitch singing".<sup>12</sup> Mursell endorses instrumental accompaniment to singing to help "carry the song along" but warns "you must be careful not to let the accompaniment overpower the singing."<sup>13</sup>

A more detailed discussion of piano accompaniment is

---

<sup>10</sup>Maurine Timmerman, Let's Teach Music, (Evanston, Illinois, Summy-Birchard Publishing Company, 1958), p. 78 and p. 88.

<sup>11</sup>Irving Cheyette and Herbert Cheyette, Teaching Music Creatively, (New York: McGraw-Hill Book Company, 1969), p. 11.

<sup>12</sup>Archie N. Jones, Music Education in Action, (Boston: Allyn and Bacon, Inc., 1960), p. 55.

<sup>13</sup>James L. Mursell, Music Education: Principles and Programs, (New York: Silver Burdett Company, 1956), p. 213.

presented by Nye and Nye<sup>14</sup> in which the following procedure is outlined:

- (1) The teacher plays the melody of the entire song.
- (2) The melody of the first phrase is played while the children mouth the words silently.
- (3) The children sing the phrase with the piano.
- (4) Each subsequent phrase of the song is presented similarly.
- (5) As the song is learned, support of the instrument is gradually withdrawn to gain independence from it.

Further, in the opinion of Nye and Nye, while it is highly desirable to have a piano in every classroom, the piano is not essential in teaching or in accompanying songs. However, they stress that the piano has its greatest use at two points in the learning process: (1) at the beginning, when a song is introduced by playing it on the piano with simple accompaniment, permitting the melody to predominate clearly, and (2) at the end, when addition of piano accompaniment enhances the musical effect of the performance. Nye and Nye offer three limitations of the use of the piano: (1) when the teacher is playing the piano, he cannot hear the children well enough to determine if each child is singing correctly.

---

<sup>14</sup>Robert Evans Nye and Vernice Trousdale Nye, Music in the Elementary School, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970) pp. 159, 194-195.

(2) when the teacher is in a stationary position, he is unable to move through the class so he may help individual children with their singing problems, and (3) when the piano is used constantly, children might not develop independence in singing.

It is apparent music educators speculate piano accompaniment can be detrimental to musical development in that it overpowers the young voice and encourages dependency upon the instrument. In this regard, Gordon is explicit in his suggestion that only harmonic accompaniment be provided.

"The teacher should provide the out-of-tune singer with simple harmonic (not melodic) accompaniment to his echo responses on an autoharp, guitar, ukulele, or piano; it is much easier for an out-of-tune singer to develop a sense of tonality by listening to a "chording" instrument. When the piano is used for this purpose, the teacher should never play the melody; to do so provides the student an opportunity not to concentrate on his intonation. . . . Moreover, it is more difficult for an out-of-tune singer to match tones played on a piano or xylophone than it is to match the human voice. The use of a full piano accompaniment should be reserved until students have developed good singing habits."<sup>15</sup>

#### Purpose of the Study

While it may be true that continuous use of traditional accompaniment on piano (that is, melody and

---

<sup>15</sup>Edwin Gordon, How Children Learn When They Learn Music, unpublished manuscript, p. 35.

harmony) can deter children's singing development, there is no objective evidence to support this belief. It is the writer's opinion, that the piano, properly used, can be a great asset in tonal development. That is, a structured combination of accompaniment techniques should facilitate the development of the child's singing voice and therefore result in more efficient development of a child's sense of tonality. Specifically, it is hypothesized (1) singing should be accompanied with melodic reinforcement only, played in octaves on the piano, as students are learning a song, (2) after the students have become familiar with the general direction and tonal patterns of the melody, accompaniment should be changed to include both melody and harmony, and (3) finally, but gradually, melodic accompaniment should be de-emphasized to the extent that only harmonic accompaniment is used when students sing the song. Accordingly, the purpose of this study was to objectively compare the value of two different types of accompaniment in singing in terms of their contribution to the establishment of students' sense of tonality.

### Problem of the Study

The specific problem of this study was to determine if students learn to sing songs in major and minor tonality, as an initial step in tonal conceptual development, more efficiently when only harmonic accompaniment is used as compared to the use of melodic accompaniment alone (played in octaves at the piano), followed by melodic and harmonic accompaniment together, and finally harmonic accompaniment alone.

---

<sup>1</sup>Marilyn Pfladerer Zimmerman, "Brief Focused Instruction and Musical Concepts," Journal of Research in Music Education, Vol. 12 (Spring 1971), p. 25.

<sup>2</sup>Cladya Evelyn Moorhead and Donald Pond, Music of Young Children, 3 Vols. (Santa Barbara: Pillsbury Foundation for Advancement of Music Education, 1941-1944).

<sup>3</sup>Frances M. Andrews and Ned C. Deindl, Development of Techniques for Identifying Elementary School Children's Musical Concepts (University Park, Pennsylvania: Pennsylvania State University, 1967).

<sup>4</sup>Marilyn Pfladerer and Lee Sechrest, How Children Conceptually Organize Musical Sounds (Evanston, Illinois: Northwestern University, 1967).

<sup>5</sup>Donald K. Taebel, "The Effect of Various Instructional Modes on Children's Performance of Music Concept Tasks," Journal of Research in Music Education, Vol. 22 (Fall 1974), p. 170.

## Chapter II

### REVIEW OF RELATED STUDIES

#### Introduction

Investigations conducted by Zimmerman<sup>1</sup>, Moorhead and Pond<sup>2</sup>, Andrews and Deihl<sup>3</sup>, Pfloderer and Sechrest<sup>4</sup> and Taebel<sup>5</sup> bear some relationship to the present study. They are concerned with the overall development of musical concepts of elementary school children.

---

<sup>1</sup>Marilyn Pfloderer Zimmerman, "Brief Focused Instruction and Musical Concepts," Journal of Research in Music Education, Vol. 18 (Spring 1971), p. 26.

<sup>2</sup>Gladys Evelyn Moorhead and Donald Pond, Music of Young Children, 3 Vols. (Santa Barbara: Pillsbury Foundation for Advancement of Music Education, 1941-1944).

<sup>3</sup>Frances M. Andrews and Ned C. Deihl, Development of Technique for Identifying Elementary School Children's Musical Concepts (University Park, Pennsylvania: Pennsylvania State University, 1967).

<sup>4</sup>Marilyn Pfloderer and Lee Sechrest, How Children Conceptually Organize Musical Sounds (Evanston, Illinois: Northwestern University, 1967).

<sup>5</sup>Donald K. Taebel, "The Effect of Various Instructional Modes on Children's Performance of Music Concept Tasks," Journal of Research in Music Education, Vol. 22 (Fall 1974), p. 170.

<sup>6</sup>Philip Hall Miller, "An Experimental Analysis of the Development of Tonal Capabilities of First Grade Children," Studies in the Psychology of Music: Vol. X, ed. Edwin Gordon (Iowa City: University of Iowa, 1970), p. 77.