A COMPARISON OF EXPECTED AND OBSERVED PIANO SKILLS REQUIRED OF PUBLIC SCHOOL MUSIC TEACHERS IN THE STATE OF NORTH CAROLINA

by

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APPROVAL SHEET

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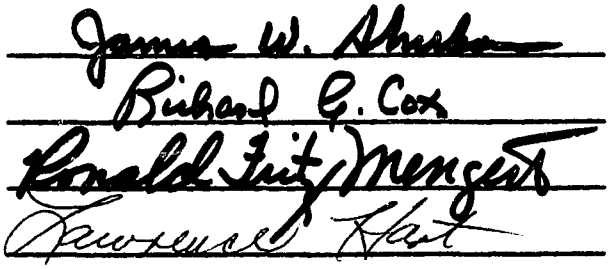
Committee Members 

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CASE, TRELLES GLENN. A Comparison of Expected and Observed Piano Skills Required of Public School Music Teachers in the State of North Carolina. (1977) Directed by: Dr. Walter L. Wehner. Pp. 119.

The problem of this study was to determine if the performance standards imposed on the music education major are comparable to the actual performance standards demonstrated in the teaching situation. The purpose was to investigate whether the music education teachers in selected public schools in North Carolina demonstrated piano skills which were stressed in their piano study in their current music teaching situations.

The following hypotheses were investigated: (1) no significant relationship exists between 19 skills most frequently stressed in college piano study and those skills demonstrated in teaching; (2) no significant relationship exists between eight audible skills stressed in piano study and those skills demonstrated in teaching as evaluated by the observer and a panel of music specialists; (3) no significant relationship exists between the audible skills most frequently demonstrated in teaching and the audible skills as evaluated by the observer and music specialists; (4) no significant relationship exists between the piano literature studied in college and the piano literature utilized in teaching; and (5) no significant relationship exists between the area of specialization and the utilization of the piano in the teaching situation. The five null hypotheses were tested at the .05 level of significance. The Spearman rank order correlation coefficient revealed significant relationships between eight skills. The null hypothesis failed to be rejected for the remaining 11 skills. Hypothesis two failed to be rejected. A significant

relationship was found between the audible skills demonstrated in teaching as evaluated by the observer and music specialists. Data regarding hypotheses four and five did not meet criteria necessary to compute a chi square; analysis was not completed.

The data-collection instruments employed were the questionnaire and rating sheet, constructed by the researcher. Questionnaires were mailed to 278 of the 1,356 music teachers in North Carolina. A total of 184 usable questionnaires were used in the study, representing teachers from band, choral, elementary, general, and orchestra categories. The rating sheet was employed to evaluate the piano skills of 58 participants in a teaching situation. An audio tape was also made to assist a panel of music specialists to evaluate the teaching session.

The findings revealed that the five most emphasized piano skills in the participants' training were (1) note accuracy, (2) fingering, (3) rhythm, (4) scales, and (5) technique. The five skills least emphasized in training were (1) score reduction, (2) improvisation, (3) sight reading, (4) open score reading, and (5) transposition.

The five skills most emphasized in teaching were (1) chords, (2) note accuracy, (3) rhythm, (4) accompanying, and (5) sight reading. The five skills least emphasized in teaching were (1) score reduction, (2) ensemble playing, (3) open score reading, (4) compositions, and (5) pedaling.

Of the piano skills emphasized in either piano training or teaching, eight significant relationships were found to exist. The relationship between the piano skills emphasized in training and the skills heard by the observer and the music specialists was not found to be

significant. However, there was a significant correlation between what the participants reported they used in teaching and what skills the observer and music specialists heard.

Based on the findings, the following major conclusions were made:

1. The public school music teachers participating in the study were trained to teach in more than one area of music, but certain skills stressed in piano study had little relationship to the actual teaching situation.

2. The literature the public shool music teachers indicated as having performed in college were unrelated to their teaching situations.

3. There was a relationship between what the music teachers reported and what the observer and music specialists heard in the use of piano skills.

4. There was a significant relationship between the specific skills most frequently demonstrated by the public school music teachers in teaching and what the observer and music specialists heard from the tape recordings.

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CHAPTER I

INTRODUCTION

Music educators in public institutions, regardless of size and educational level, past aims, or philosophies, have the essential responsibility of influencing the direction toward which a total music program in education will proceed. A philosophical approach to the development of a music program encompasses the establishment of goals, the methods for the implementation and attainment of these goals, and the procedures for evaluating these methods.

The goals of many music programs in public education include the opportunity for self-expression, the development of a skill, the understanding of cultural heritage, and the discernment between mediocre and superior qualities in music. These goals are attained through the teaching of general and specialized music courses and the scheduling of activities planned to meet the needs of an ever-changing society.

The philosophy held by music educators in the various areas of music teaching differs in regard to the function of the piano in the total music program.[1] The disparity of purpose between piano teacher and music educator regarding the use of the piano is particularly noticeable in the goals and objectives of college music degree programs where the curriculum is designed to prepare students majoring in music to meet performance

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[1]Helen Robinson and Richard L. Jarvis, eds., Teaching Piano in Classroom and Studio (Washington: Music Educators National Conference, 1967), pp. 146-50.

proficiency standards. Research has been needed to help determine if the piano performance standards imposed on the music education major are comparable to the actual performance standards demonstrated in the teaching situation. Empirical research has shown that, when emphasis is placed on preparing the student to use a piano adequately in the daily instructional activities as a classroom music teacher, the curriculum should include the teaching of skills, such as playing and/or improvising accompaniments, sight reading, transposing, and reading open scores. Does piano study on the college level actually prepare the student to develop and use these skills, or does it emphasize only the performance skills required to play standard piano literature? How great is the disparity between piano skills expected in college of the public school music teacher and the piano skills actually required of that teacher in the classroom?

Background for the Study

Existing literature supports the theory that music education programs fail to prepare students adequately for the teaching profession. Knuth suggests that some music education programs are unsuccessful in preparing students to sing and play instruments with confidence and to understand the elements of music competently enough to teach them to children.[2] Buchanan concluded that teachers were dissatisfied with the piano training they received in college and that certain competencies should have been stressed in preparing them for their present teaching situations.

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[2]Alice M. Knuth, "Integration of the Systems Approach and Technology in Learning and Teaching Music," Council for Research in Basic Education 25 (Summer 1971):12-25.

Those competencies were accompanying, score playing, sight reading, improvisation, playing by ear, and harmonization.[3]

Rast suggested that courses are poorly organized and materials of study are too often unrelated to future needs of students in programs of teacher training.[4] Pace concluded that music educators have failed to define precisely what keyboard competencies they feel the undergraduate music education major should possess. He summarized the type of piano program which could have meaning.[5] Such a course of study would include "an interrelated program of fundamentals, sight reading, transposition, ear training, improvisation, melody harmonization, technic and repertoire, which would be directly related to the professional needs of the student."[6] According to Wunsch, despite the fact that improvisation, "the essence of creativity," should be expected to be a high priority skill in any musical curriculum, it is often encouraged only as an additional skill in the keyboard class.[7] Lindstrom suggested that improvisation plays little or no part today in the training of the average piano student, though

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[3]Gillian Buchanan, "Skills of Piano Performance in the Preparation of Music Educators," Journal of Research in Music Education 12 (Summer 1964):134-38.

[4]Lawrence Robert Rast, "A Survey and Evaluation of Piano Requirements for Students Enrolled in Programs of Teacher-Training in Elementary Education at Selected Colleges and Universities in the State of Illinois" (Ph.D. dissertation, Northwestern University, 1964), pp. 69-70.

[5]Robert Pace, "The Selection and Use of Intermediate Piano Materials to Supplement Modern Elementary Piano Tests" (Ed.D. dissertation, Teachers College, Columbia University, 1956), pp. 15-27.

[6]Robert Pace, Appendage to "Summary of Piano Conference held at Eastern New Mexico University," 25 January 1964.

[7]Ilse Gerda Wunsch, "Improvisation . . . how?" The American Music Teacher, June-July 1972, pp. 22-23.

improvisation is "perhaps the most typical and characteristic mode of musical expression in today's world."[8]

In American education the expectation is virtually universal that the adequately trained elementary school music teacher will have at least some minimum proficiency in keyboard (piano and organ) instruction skills.[9] Elementary music series and classroom music courses in teacher training institutions generally emphasize a need for the acquisition of basic piano skills with the implied assumption that when the student completes these courses he will be able to use the piano in the elementary classroom as an accompanying instrument for classroom singing activities.[10] If the elementary school music teacher is expected to be proficient in basic piano skills, the music school should establish performance criteria in those piano skills. The performance criteria should be based on performance level expectations in the classroom of the public school.

Recognition of the piano as the traditional instrument for use in instructional settings, or substitution of various fretted or other acceptable keyboard instruments, precludes the establishment of the piano instruction in a position in the college music education curriculum as supported by degree and certification requirements.[11] Webber recommended

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[8]Raymond Linstrom, "An Approach to Piano Improvisation," The Music Teacher, February-March 1974, pp. 38-39.

[9]Victor E. Lund, "Evaluation of Electronic Self-Instruction on Piano Keyboard," Council for Research in Music Education 8 (Fall, 1966):24.

[10]Ibid., p. 22.

[11]Division of Teacher Education, Standards and Guidelines for Approval of Institutions and Programs for Teacher Education, SDPI Publication No. 453 (Raleigh, North Carolina: State Department of Public Instruction, 1973), pp. 46-48.

that each music department should:

1. Re-evaluate its philosophy and procedures of piano instruction for the music education major.

2. Incorporate as a definite part of its required standards for music teacher training, functional minimum piano requirements for all music education majors.

3. State minimum piano requirements in terms of competencies or critical tasks needed by the well-qualified school music teacher.

4. Use as a guide for those requirements . . . NASM-MENC standards of training and the findings of research studies.

5. Require evidence of proficiency through the use of carefully administered proficiency examinations which must be passed at least in part before student teaching.

6. Evaluate piano proficiency at entrance, each semester of study, before entrance to student teaching, and before graduation.

7. Re-evaluate, re-define, and reorganize piano courses for the music education major in terms of providing functional piano experiences and the use of the piano as a basic tool.

8. Select properly qualified piano teachers who understand the basic philosophy and objectives of piano instruction for the music education major and who know how to get results in the shortest possible time.

9. Use every available means to secure faculty and student understanding of the importance of functional piano facility for the music education major.

10. Plan for the future by encouraging music education majors to introduce keyboard experiences and class piano instruction into their own future music programs.[12]

Authors and researchers[13] have demonstrated their support of the necessity for guidelines in determining what music education students should be

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[12]Emily Elizabeth Webber, "Minimum Piano Requirements for Music Education Majors" (Ph.D. dissertation, Florida State University, 1958), pp. 124-25.

[13]J. B. Lyke, "An Investigation of Class Piano Programs in the Six State Universities of Illinois and Recommendations for Their Improvement" (Ed.D. dissertation, Colorado State College, 1968), pp. 16-19.

taught.[14] The North Carolina State Division of Teacher Education has published standards for approval of programs for teacher education. How much disparity is there between what is taught and what is actually used later in a music classroom teaching situation?

Purpose of the Study

The purpose of this study was to investigate whether the music education teachers in selected public schools in North Carolina demonstrated piano skills, which were stressed in their piano study, in their current music teaching situations.

Succinctly, the purpose was to investigate:

1. Possible relationships between skills stressed in piano study (i.e., harmonization of a melody, transposition, sight reading) and the skills used in teaching.
2. Possible relationships between piano pieces studied by the music education major (e.g., inventions, preludes, sonatinas) and music literature actually used by the teacher in teaching.
3. Possible relationships between teaching assignments and utilization of the piano.

Need for the Study

Inquiry has exposed the fact that a lack of competency at the keyboard now hinders the development of programs and completion of required duties in some existing teaching assignments. Few teachers find themselves in situations where some versatility is not required. The State Guidelines in Music, in advocating greater versatility by musicians, states:

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[14]Lund, "Electronic Self-Instruction," p. 23.

> The program should also provide for a substantive emphasis in supportive areas of musical performance. As a result of such emphasis, the prospective teacher should demonstrate proficiency in reading, transposing, and improvising accompaniments appropriate to the needs of a wide variety of instructional settings. While the piano has been traditionally utilized for this purpose, the substitution of various fretted, or keyboard instruments may be acceptable.
>
> Also, as a result of study in the supportive areas, the prospective teacher should demonstrate adequate knowledge and understanding of percussion and vocal techniques and an experiential familiarity with representative instruments of the wind and string families. Additional preparation in the supportive performance areas should be individualized to meet the specific needs and interests of each student. Preparation for instrumental teaching, for example, should provide for further concentration on those instruments normally found in the band or orchestra. Similarly, the program should provide students planning to enter the secondary choral field with preparation in the common practices of vocal accompaniment utilizing both keyboard and fretted instruments.[15]

Instructional procedures play a vital role in the acquisition of a skill. A lack of formalized instructional procedures may augment music educators' perplexity over the inability of students to attain more facility in playing the piano.[16] The need of skills is further attested to in the Music Educators National Conference publication by advocating "additional skills, by both instrumental and vocal majors, in reading, improvising, harmonizing, transposing, arranging, analyzing, preparing scores, demonstrating the scores in rehearsal, and directing from the piano.[17]

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[15]Division of Teacher Education, Standards, pp. 46-48.

[16]Celia Mae Bryant, "Keyboard Problems and Physical Solutions," Clavier, September 1964, p. 15.

[17]Robinson, Teaching Piano in Classroom, pp. 121-28.

Hypotheses

The following null hypotheses were tested:

1. No significant relationship exists between the skills most frequently stressed in college piano study and the skills most frequently demonstrated in teaching by the respondents. The skills include accompanying, chord progressions, chords, compositions, dynamics, ensemble playing, fingering, harmonization of a melody, improvisation, note accuracy, open score reading, pedaling, phrasing, rhythms, scales, score reduction, sight reading, technique, and transposition.

2. No significant relationship exists between the audible skills most frequently stressed in piano study by the respondents and the audible skills most frequently demonstrated in teaching as evaluated by the music specialists. The audible skills include accuracy, rhythm, phrasing, dynamics, pedaling, improvisation, chord progressions, and accompanying.

3. No significant relationship exists between the audible skills most frequently demonstrated in teaching by the respondents and the audible skills as evaluated by the music specialists. The audible skills are identical to those skills in Hypothesis 2.

4. No significant relationship exists between the piano literature studied in college and the piano literature utilized in teaching.

5. No significant relationship exists between the area of specialization and the utilization of the piano in the teaching situation.

CHAPTER II

REVIEW OF RELATED LITERATURE

In reviewing the literature, a careful search was made to review the studies and writings which are related to the training of music education majors in piano. According to the literature surveyed, an existing problem is that of correlating the presently contrasting standards of performance used during college training and those standards of performance that are used in classroom teaching. Most writers are in agreement as to the piano skills that music education majors should possess, but they are less likely to agree on the order of importance or the most effective methods of developing these skills.

The literature dealing with school music programs and how the piano is actually used is limited. There are several possible reasons for the limited amount of research in this area. First, recommendations for music education programs which involve using the piano have not been widely accepted.[1] Second, in recent years, the piano has not held an important position in the school music programs.[2] Third, there appears to be a lack of a basic set of evaluative criteria with which the role

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[1] Billie Rae W. Erlings, "A Design for Employing Instructional Television in the First Term of College Functional Piano, Developed in a Comprehensive Musicianship Program" (D.M.A. dissertation, University of Oregon, 1970), pp. 1-15.

[2] Marilyn Louise Curt, "The Use of Electronic Pianos to Facilitate Learning in Seventh Grade General Music Classes" (Ph.D. dissertation, University of Kansas, 1970), pp. 3-19.

of the piano can be assessed. Finally, most of the programs are still in the process of development at this time.

The literature review is presented in this paper in two sections: (1) the piano skills advocated for the music education major, and (2) the studies which are relevant to the present study.

Literature Pertaining to the Piano Skills Advocated for the Music Education Major

Beginning in the early grades, students should be encouraged to improvise and to write music.[3] The prime goal supported by participants at a two-week seminar of musicians and teachers, held at Yale University, was to encourage music teachers to teach students not to limit their performances and listening sessions to works of other composers, but to lead them into creative improvisation and writing. Lyke, Wunsch, and Tanthram also advocated the importance of teaching the art of improvisation.

Lyke proposed the use of the piano as a resource instrument in teaching music. He visualized the keyboard as a musical map in that it allows one to improvise selections by experimenting with sounds, playing simple melodies from score and by ear, accompanying melodies with chords, and transposing melodies and harmonies to various keys.[4]

Wunsch stated that improvisation is a vital element of music education. Improvisation provides the student with an outlet for experimentation which illuminates abstract musical thinking and, at the same time,

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[3]Joseph Turner, "Innovation and Experiment," Council for Research in Music Education 6 (Fall 1965):1-7.

[4]James Lyke, "Improving Listening Through a Program of Keyboard Experience in Elementary Music," Council for Research in Music Education 9 (Spring 1967):64-66.

offers him the opportunity to express himself intuitively. It serves as a release for the student from a preoccupation with mechanical finger-work imitation, and interpretation.[5]

Trantham viewed improvisation as a category within the realm of functional piano. Functional piano can be defined as the ability to improvise, sight read, play by ear, and accompany or create harmonizations for tunes. He listed improvisation and sight reading as the two broad categories of skills in functional piano that must be interrelated.[6]

Lowder, Hart, and Burrows considered several skills to be desirable for a pianist. They, however, agreed that sight reading was the most important skill for the pianist to develop. Lowder advocated that piano instruction should include sight reading of all textures of music, selected according to the capabilities of the students. He observed that the harmonization of melodies is a requirement in most college piano instruction,[7] and recommended that chordal analysis should be practiced whereby the student could play all positions of chords and their inversions, stressing a consistent fingering pattern for each.[8] He stressed the importance of playing chords and inversions in many keys in order to comprehend more

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[5]Ilse Gerda Wunsch, "Improvisation . . . how?" pp. 22-23.

[6]William E. Trantham, "A Music Theory Approach to Beginning Piano Instruction for the College Music Major," Journal of Research in Music Education 18 (Spring 1970):49-56.

[7]Jerry E. Lowder, "How Comprehensive Musicianship is Promoted in Group Piano Instruction," Music Educators Journal 59 (November 1973):56-58.

[8]Ibid., p. 57.

quickly a chordal outline as a whole, and theorized that ensemble playing should help to improve sight-reading ability.[9]

Hart listed several skills that were necessary to the well-equipped pianist, and classified sight reading as the most important. He stated: "Experience has shown, quite clearly, that the desired standards of pianism and musical comprehension are more easily attainable when the student possesses the skill of fluent sight reading."[10] Additional skills of importance for the pianist to attain, listed by Hart, are rhythmic awareness, ability to transpose, participation in ensembles, playing by ear, and the cultivation of keyboard harmony.[11]

Burrows advocated the use of the piano as a teaching tool in courses of general music, music appreciation, and instrumental classes. He stated that sight reading and transposition are essential skills in accompanying vocal and instrumental groups.[12] McLain indicated that modulation, principles of good fingering, pedaling, and touch are the most desirable skills for the music teacher to attain.[13]

Buchanan's findings suggested that transposition at the keyboard is a valuable and necessary skill for the music education student, and

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[9]Ibid., p. 56.

[10]Lawrence Elbert Hart, "An Approach to a Practical Pedagogy of Sight Reading" (D.M.A. dissertation, Eastman School of Music of the University of Rochester, 1958), p. iv.

[11]Ibid., p. 25-44.

[12]Raymond Burrows, Elementary Piano Instruction in the College (New York: Teachers College, Columbia University, 1944), p. 32.

[13]Margaret Starr McLain, Class Piano (Bloomington, Indiana: Indiana University Press, 1974), p. v-vii.

particularly valuable to the student whose music career would involve reading and learning instrumental and vocal scores. Buchanan emphasized the ensemble principles and rehearsal techniques which students learn in studying piano, and which he believed can be transferred to the school music organizations, of the type which the students would direct. He further explained that the ability to play vocal scores at the keyboard has practical value for the music educator in that most public school music teachers could be involved in various musical organizations. Another practical value he stressed was the ability to play patriotic songs, as music teachers are frequently called upon to play these songs at various meetings.[14]

Nolin found in his study of twenty-six elementary schools in a midwestern city that students generally disliked singing without the piano or other accompaniment and singing with records the teacher played. He discovered that students preferred singing songs with piano accompaniments, and concluded that greater emphasis should be placed on piano training for prospective teachers.[15]

Rast's investigation of piano requirements for students of elementary education was similar to the present study. In this study an initial questionnaire was sent to those concerned with teaching piano to

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[14]Gillian Buchanan, "Skills of Piano Performance in the Preparation of Music Educators," pp. 134-38.

[15]Wallace H. Nolin, "Attitudinal Growth Patterns Toward Elementary School Music Experiences," Journal of Research in Music Education 21 (Summer 1973):132-33.

the elementary education major. He subsequently interviewed each respondent, investigated facilities for instruction, observed classes that were available to him, and evaluated his personal visits.

Rast found the following skills to be most frequently stressed in piano courses he observed. Students were required to:

1. Play I IV V^7 chords in major and minor keys.
2. Play major and minor triads in all keys.
3. Play major and minor scale patterns in all keys.
4. Play single line elementary music text melodies at sight.
5. Play blocked chords to single line elementary music text melodies at sight.
6. Play varied accompaniments for single line melodies using I IV V^7 chords (varying the style).
7. Play two and three part elementary songs from standard music series accompaniment books at sight.
8. Play four-part compositions (hymn style) at sight.
9. Transpose single line classroom melodies at sight.
10. Play prepared accompaniments from standard classroom music accompaniment texts.
11. Play prepared transposed accompaniments from standard classroom music accompaniment books.
12. Improvise and harmonize short melodic phrases.[16]

Richards[17] described the class piano program at Montana State University, where skills in the beginning classes were similar to the skills

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[16]Lawrence Robert Rast, "A Survey and Evaluation of Piano Requirements for Students Enrolled in Programs of Teacher-Training in Elementary Education at Selected Colleges and Universities in the State of Illinois," pp. 69-70.

[17]William Henry Richards, "Trends of Piano Class Instruction 1815-1962" (D.M.A. dissertation, The Conservatory of Music, University of Kansas City, 1962), p. 160.

advocated for the beginning music education major. Beginning classes had experiences with the following: (1) rudiments of music; (2) scales, cadences, arpeggios, and finger patterns; (3) sight reading; (4) score reduction; (5) solo and ensemble literature from all periods as well as community and patriotic songs; and (6) keyboard harmony skills including improvisation, playing and harmonizing by ear, improvisation and realization of a figured bass.

The second year classes were involved with further development of the experiences listed above. In addition, newer skills included: (1) vocal score reduction; (2) transposition; (3) improvisation; (4) technical facility; (5) performance of piano literature; (6) playing of assembly songs; and (7) scales, chords, cadences, and chord progressions. Richards suggested that a piano proficiency committee should be composed of faculty from class piano, applied piano, and music education.

In a dissertation by Duckworth,[18] piano study was presented in such a way as to build concepts for use by prospective teachers who could present many of the basic ideas to students in a public school music situation. He designed a curriculum for mastering practical and instructional skills. The students were taught the fundamentals of music in such a way as to develop insight into methods of teaching tonal and rhythmic patterns, materials, and functional skills. He taught rhythm through clapping, chanting, and body movement. Harmonization was developed through a visual and

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[18]Gordon Duckworth, "The Organization of an Integrated Course for Piano Majors at the University of Minnesota" (Ed.D. dissertation, Teachers College, Columbia University, 1960).

aural study of melody. Improvisation was conceived through several methods: (1) imitations of other works, (2) students constructing ostinato patterns over given melodies, and (3) creating music through designed harmonic structures.

Duckworth believed that sight reading was improved through constant focus on the rhythmic patterns. He stressed the idea of melodic content absorbed through rhythmic design.

Dominick[19] focused upon the functional aspects of piano training. His dissertation centered on developing a text for the non-pianist freshman music student. He developed a series of units in keyboard study to be accomplished in a year's work. The lessons included such musical functions as form, the structural elements of music, and the functional use of the materials studied.

In each unit of Dominick's text, a particular musical concept and its keyboard application was emphasized. The minor scale, as an example, is studied through a particular composition. This study is valuable to the non-pianist in its detailed arranged material which promotes understanding of music ideas through keyboard application.

Pinter[20] devised lesson plans for developing aural and visual skills in harmonizing given melodies. Students were asked to harmonize given melodies and then compare the harmonizations with those prepared by

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[19]Rocque Frank Dominick, "A Plan for Developing Musicianship at the Keyboard" (Ed.D. dissertation, Teachers College, Columbia University, 1956).

[20]Alvin Paul Pinter, "Developing Facility in Harmonization at the Keyboard" (Ed.D dissertation, Teachers College, Columbia University, 1956).

Pinter. The melodies were taken from folk and popular music and were harmonized according to the style of the piece. Pinter stated that "with transposition one must know all the keys and fully understand the melodies and harmonic content of a composition," and classified transposition as being important in the development of musicianship.[21]

Literature Pertaining to Research Studies

Research relating to the teaching of reading concepts and keyboard fingering patterns was conducted by Lowder in 1969.[22] Lowder selected the principles of intervallic relationships and figured bass as the models for his investigation. His objective was to provide an analysis of errors performed on a sight-reading test administered to four college freshman secondary piano classes at the end of their first semester of instruction.

Lowder conducted his study at Indiana University with a sample of twenty-two freshmen music majors and one freshman non-music major. He was concerned with any differences between the performances of experimental and control groups, both groups receiving the same basic instruction in sight reading and other keyboard skills.

The experimental group pursued a program that stressed reading and performance skills according to the principles of intervallic relationships and figured bass. The information gained was to be used in determining whether the teaching of vertical intervallic relationships according

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[21]Ibid., p. 235.

[22]Jerry E. Lowder, "Evaluation of a Sight-Reading Test Administered to Freshmen Piano Classes," Journal of Research in Music Education 21 (Spring 1973).

to figured bass principles would improve the secondary pianists' ability to sight-read music based on tertian harmony.

At the end of the first semester of piano study, the researcher gave each subject a self-designed sight-reading test. Fifteen musical examples were included in the test. The items[23] were (1) melodic and harmonic intervals, (2) two-, three-, and four-voice examples, (3) contrapuntal and homophonic excerpts from piano literature, (4) melodies constructed of outlined chords, and (5) melodies which required chordal harmonization by the subject.

The criteria[24] selected for sight-reading proficiency were pitch, accuracy, steadiness of tempo, rhythmic accuracy, and selection of accompaniment chords. The sight-reading test was demonstrated by subjects in the experiment during individual tape-recording sessions. Three class piano teachers on the Indiana University faculty evaluated the taped performances.

In summarizing this study, Lowder made the following recommendations concerning the improvement of keyboard sight-reading skills:

1. Technical facility should be stressed by teaching the student to recognize and play scalar patterns in many keys, relating them to the scale fingerings that he has learned as a separate performing skill.

2. A great deal of chordal analysis should be practiced by the student both in class and outside of class. The teacher should stress blocking of music passages built upon chordal configurations.

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[23]Jerry E. Lowder, "An Experimental Study of Teaching Reading Concepts and Keyboard Fingering Patterns to Freshmen College Piano Classes" (Ed.D. dissertation, Indiana University, 1970), p. 8.

[24]Ibid., p. 69.

3. The student should be taught to play all positions of chords and their inversions, stressing a consistent fingering pattern for each. Chords and inversions should be performed in many keys in order to comprehend more quickly a chordal outline as a whole while reading and performing music at the keyboard.

4. Since the majority of the subjects had more difficulty in achieving correct performance in the bass clef than in the treble clef, more time should be devoted to drill on bass-clef reading.

5. A major objective in sight-reading practice should be absolute rhythmic evenness, even at the occasional expense of pitch accuracy. Improvement in evenness of tempo and in the speed of eye fixations might be accomplished by having the teacher stress ensemble playing in a class piano situation; use a very slow tempo, insisting that students count, or leading the student through his own steady performance; teach students to read by interval and by direction of melodic movement, stressing the geometric pattern of certain melodic and chordal shapes; use a wide variety of sight-reading materials, including music from all periods of history; encourage frequent sight-reading, choosing materials that can be performed fairly accurately and slowly by class members. There should be a closer relationship between the fingerings used for chord progressions and cadences and those used for hymns and other chordal textures.[25]

Similar to the Lowder study, Fjerstad[26] focused his research on the study of sight reading. Fjerstad constructed a sight-reading test to measure student ability to sight-read harmonic notation at the keyboard. He employed the metronome and tachistoscope, as did studies by

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[25]Ibid., p. 71.

[26]Clinton Dale Fjerstad, "A Comparison of Tachistoscopic and Metronomic Training for Developing Sight Reading of Harmonic Notation Within Class Piano Instruction" (Ed.D. dissertation, Indiana University, 1968).

Christ[27] and Baker,[28] to control tempo and duration of exhibited musical stimuli. When the tachistoscope was used the shutter time of the projector was gradually increased to 1/100 of a second. Subjects working with the metronome were required to play at speeds that were gradually increased.

Fjerstad used as the criteria of sight-reading ability rhythmic response and note accuracy. He concluded that there was no significant difference between the tachistoscopic group and the metronome group in the ability to sight-read harmonic notation in piano instruction, noting that reading errors increased when the distance on the staff between notes in a chord was more than an octave, when notation was in high or low ranges, and when accidentals occurred in the chord notation. He suggested that students should be taught to group chord patterns and to respond rapidly with hand shapes and fingerings.[29]

The Freeburne study[30] elicited answers from public school music teachers concerning the usefulness of the piano in their work. Freeburne surveyed, besides public school music teachers, administrators and college music teachers in nineteen North Central states. The public school music teachers ranked particular skills in order of their utilization in performance in regular teaching situations. The skills included sight reading,

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[27]William B. Christ, "The Reading of Rhythm Notation Approached Experimentally According to Techniques and Principles of Word Reading" (Ed.D. dissertation, Indiana University, 1953).

[28]Charles Edgar Baker, "A Comparison of Two Methods of Teaching the Reading of Harmony" (Ed.D. dissertation, Indiana University, 1964).

[29]Fjerstad, "Tachistoscopic and Metronomic Training," p. 80-81.

[30]Frederick Glenn Freeburne, "Functional Secondary Piano Training of Music Teachers" (Ed.D. dissertation, Indiana University, 1952).

keyboard harmony, accompanying, improvising simple accompaniments, transposition, and knowledge of effective practice technique.

In agreement with the public school music teachers, the college music teachers listed the same skills, but added open score reading. Both public school music teachers and college music teachers indicated that they should have received more training in these areas.

Lyke was concerned with the group training of music education majors in piano skills. His study was limited to the class piano programs for music education majors in the six state universities of Illinois. Criteria established through Lyke's study for class piano programs were similar to the criteria advocated by the writer of this study in that each writer focused on piano programs for the music education major. While Lyke investigated piano programs from the standpoint of the training institution, the present research study is an attempt to investigate the piano skills possessed and advocated by the music education major in the teaching situation.

Lyke obtained and established criteria for first and second year programs in class piano instruction from sources within and without the University of Illinois. He found that the minimum adequacies possessed by the music education major at the end of the first year should be:

1. Perform with musical understanding piano repertoire from the main historical periods. . . .

2. Build major, minor, chromatic, modal and whole-tone five-note patterns (pentachords) on any tone; in addition, build pentatonic scales on any tone.

3. Play all major scales in tetrachord style divided between the hands, and hands alone ascending and descending.

Also, play the white-note form of the dorian, phrygian, lydian or mixolydian mode.

4. Play by ear melodies, harmonies, or both of some familiar songs such as "Silent Night" or "Home on the Range"; the songs selected should use harmony which encompasses at least the primary (I, IV, V) chords.

5. Accompany members of the piano class in the singing of songs such as "Go Down Moses."

6. Sight read, without halting of rhythm, . . .

7. Create simple melodies over ostinato basses which show a knowledge of repetition and contrast; these melodies should be played in either hand or hands together and embrace both traditional and contemporary practice.

8. Play back to the instructor dictated melodic and harmonic patterns; the melodies should be at least phrase length (about four measures) and the chord patterns should include at least four chords. A suggested chord pattern is I II^6 V^7 I.

9. Play chord patterns utilizing the primary and secondary chords in both major and minor keys. Two suggested progressions are as follows:

   a. I IV I_4^6 V^7 I.

   b. I VI IV II I_4^6 V^7 I.

10. Analyze significant melodic, harmonic, contrapuntal and structural details in music being studied and performed.

11. Transpose up or down a whole step simple piano arrangements of songs. . . .

12. Harmonize written melodies which suggest the use of both primary and secondary (II, III, VI) chords; . . .

13. Perform simple four-hand literature and understand basic principles of piano ensemble; . . .

14. Perform at the keyboard a three-part (SSB) vocal score in close position. . . .

15. Comment and interact with other class members thereby developing critical listening skill and a basic for judging

good (or poor) performance; in addition, develop methods of improving his own and others' performing skill.[31]

At the end of the second year, the student should:

1. Continue to study and perform with musical understanding piano repertoire from the main historical periods. . . .

2. Play from memory the standard versions of the . . . patriotic songs. . . .

3. Play all major scales hands together at least two octaves ascending and descending and be able to construct the natural minor scale (aeolian mode) in tetrachord style. In addition, build the dorian, phrygian, lydian and mixolydian mode on tones other than their white-note form.

4. Play major, minor, dominant seventh and diminished seventh chords and arpeggiate them on any tone.

5. Play by ear melodies, harmonies, or both of several familiar songs which use secondary dominants and an occasional diminished seventh chord. . . .

6. Accompany individual members of the piano class in vocal and instrumental solos selected from early grade collections used in public school music. Continue accompanying group singing within the piano class using material from community song books.

7. Sightread, without halting of rhythm, any of the material found. . . .

8. Improvise melodies over ostinato patterns and after a composer's style using exemplars . . . . In addition, improvise pieces within preconceived harmonic and metrical schemes; . . .

9. Play back to the instructor melodies and harmonic patterns of about four-bar phrase length with no more than two chords being used in each measure. The harmony should include chromatic chords such as the secondary and diminished seventh.

10. Play chord progressions in at least six major and minor keys which utilize the secondary seventh chord. . . .

11. Harmonize the major scale in any key. . . .

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[31]Lyke, "Piano Programs in Six State Universities," pp. 8-12.

12. Continue to analyze significant melodic, harmonic, contrapuntal and structural detail in music being studied and performed.

13. Transpose up or down a half step, whole step, and occasionally a third, songs, hymns and excerpts from easier piano literature. . . .

14. Harmonize melodies . . .

15. Continue to perform and improve in piano ensemble playing . . .

16. Reduce at the keyboard four-part vocal scores to close position. . . .

17. Continue to interact, comment, and be guided by the teacher in making musically valid judgments about performance and means to achieve improvement of performance.

18. Modulate to the dominant key with simple chord patterns . . .

19. Realize figured bass symbols given for simple hymns . . .

20. Reduce a four-part string score to close position at the keyboard; this necessitates a knowledge of tenor and alto clef transposition. . . .[32]

Music educators in Illinois ranked class piano experiences in order of importance as:

1. Harmonization
2. Sight reading
3. Accompanying
4. Transposition
5. Chord progressions
6. Playing by ear
7. Modulation
8. Improvisation
9. Technical development
10. Critical listening[33]

In this same survey, they ranked skills of less importance as:

1. Repertoire
2. Ensemble playing

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[32]Ibid., pp. 12-16.

[33]Ibid., p. 101.

3. Realization of figured bass
4. Instrumental score reduction
5. Memorization[34]

The Illinois class piano teachers ranked class piano experiences in order of importance as:

1. Sight reading
2. Harmonization
3. Technical development
4. Playing by ear
5. Transposition
6. Accompanying
7. Chord progressions
8. Repertoire study
9. Critical listening
10. Ensemble playing[35]

Their ranking of the less important experiences included:

1. Memorization
2. Vocal score reduction
3. Instrumental score
4. Modulation
5. Realization of figured bass[36]

Music educators from across the nation ranked class experiences in order of importance as:

1. Harmonization
2. Sight reading
3. Accompanying
4. Critical listening
5. Playing by ear
6. Chord progressions
7. Analysis
8. Transposition
9. Technical development
10. Improvisation
11. Development of style[37]

This group ranked the experiences of less importance as:

1. Repertoire study
2. Ensemble playing

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[34]Ibid. [35]Ibid., p. 102. [36]Ibid. [37]Ibid., p. 104.

3. Instrumental score reduction
4. Patriotic songs
5. Memorization
6. Realization of figured bass[38]

Class piano teachers from across the nation ranked class piano experiences in order of importance as:

1. Sight reading
2. Playing by ear
3. Harmonization
4. Transposition
5. Improvisation
6. Critical listening
7. Accompanying
8. Development of technique
9. Chord progressions
10. Analysis[39]

The experiences of less importance were:

1. Memorization
2. Realization of figured bass[40]

Lyke found that there was agreement between music educators and class piano teachers on the importance of experiences with the following skills:

1. Sight reading
2. Harmonization
3. Playing by ear
4. Accompanying
5. Critical listening
6. Chord progressions
7. Transposition
8. Technical development
9. Improvisation
10. Analysis[41]

Webber investigated minimum piano requirements for music education majors. Minimum piano requirements were established "through an investigation, analysis, and description of related backgrounds in music education,

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[38]Ibid. [39]Ibid., p. 105. [40]Ibid. [41]Ibid., p. vi.

functions of piano study for the music education major, and minimum piano requirements recommended by national music teacher associations."[42] Her study was limited to the music education curricula provided by teacher training institutions, and there was no effort to conduct controlled experiments. In a sample of 395 schools, Webber found strong support to indicate that teacher training institutions are not completely successful in organizing curricula and adapting philosophies to meet demands created by changing times. She reported that many schools failed to develop the functional type of musicianship needed by the music educator in today's schools.

Webber presented a comparative analysis of existing requirements in schools of minimum piano skills for all music education majors. The skills required and total number of schools requiring these skills were:

Skills	Number of Schools
1. Technical proficiency in scales and (or) arpeggios	100
2. Performance from memory of a representative number of pieces in various styles	59
3. Performance from memory of one or more patriotic songs: "Star Spangled Banner," "America," "America the Beautiful"	86
4. Sight reading of hymns or community songs	155
5. Sight reading vocal accompaniments or pieces of the type found in school music books	143

[42]Webber, "Minimum Requirements," p. 3.

6.	Sight reading simple instrumental accompaniments	102
7.	Sight reading a 3 or 4 staff choral score	27
8.	Harmonization of melodies at sight using simple chords and styles of accompaniment	127
9.	Improvisation of music suitable for rhythmic activity	38
10.	Playing by ear	36
11.	Transposition of easy songs and accompaniments[43]	97

Webber concluded that music education majors should pass carefully administered proficiency examinations before beginning student teaching. She recommended that college music departments propose having minimum piano requirements incorporated into state certification standards and that schools seek to establish a more uniform set of standards in minimum piano requirements for music education majors.

Summary of Skills and Programs for Music Education Majors

Search of the literature revealed that writers agreed more often on the piano skills that music education majors should possess. They disagreed on how skills should be ranked in order of importance and on the best methods in developing these skills. There is a limited amount of literature dealing with the use of the piano in school programs, but writers of most literature involving research studies suggested piano skills which were important for the music education major to possess. The skills most

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[43]Ibid., pp. 84-85.

frequently mentioned were (1) sight reading, (2) improvisation, (3) accompanying melodies with chords, (4) transposition, (5) ensemble playing, (6) score reduction, (7) rhythmic awareness, (8) modulation, (9) good fingering, (10) pedaling, (11) vocal score reading, (12) literature, (13) scales, (14) chord progressions, (15) stylistic features, and (16) analysis of music.

Lowder, Fjerstad, Freeburne, Lyke, and Webber studied some aspect of the piano training of the music education major. Lowder studied methods of improving sight reading through the principle of intervallic relationships and the figured bass. Fjerstad developed a sight-reading test to measure sight reading of harmonic notation through the use of the metronome and tachistoscope. Freeburne surveyed public school music teachers concerning the usefulness of the piano in their work. They ranked particular skills in order of their utilization. Lyke investigated the piano program for the music education major from the standpoint of the training institution. Webber, in a study involving a wide sampling of schools, presented a program of minimum piano requirements recommended by national music teachers associations.

CHAPTER III

PROCEDURES

The problem of the study was to determine if piano performance standards imposed on music education majors are comparable to the actual performance standards demonstrated in a teaching situation. This chapter will include a description of the samples, the instruments used, and the statistical treatment of the data.

Selection of Samples

Two samples were included in the study. The initial sample of 278, representing 20 percent of the population, was drawn from a listing[1] of 1,356 North Carolina music teachers. These teachers were certified and teaching music in grades K-12. From this listing, the categories of music teachers included in the sample represented the areas of band, choral, elementary, general, and orchestra.

In selecting the music teachers for the initial sample to receive a researcher-made questionnaire, stratified random sampling was employed; each major category was represented in the sample in proportion to the population percentage in each category. From the limits of the compiled population, 278 music teachers were selected randomly by employing a table of random numbers.[2]

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[1]Cultural Arts Division, Directory North Carolina Music Personnel (Raleigh, North Carolina: Department of Public Instruction, 1975-76), pp. 1-53.

[2]A Million Random Digits With 100,000 Normal Deviates (New York: The Free Press, 1955).

A second sample included five percent of the total population (68 music teachers); each teaching category was represented in proportion to the population percentage in that category. These participants were selected randomly by the use of a table of random numbers. All 68 music teachers were contacted by telephone and were asked for information concerning the use of the piano in their current teaching situations. They were also asked to participate in the study as subjects who would be observed at least once in a teaching session that would be put on audio tape. Of the 68 teachers, the 58 who reported using the piano were visited. This group included 12 band, 13 choral, 24 elementary, 6 general, and 3 orchestra teachers. Table 1[3] shows the North Carolina music teachers by category and proportionate samplings.

Methods of Collecting Data

The data-collection instruments employed in this study were a questionnaire (See Appendix A) and rating sheet (See Appendix B). The content of the questionnaire was determined by a survey of related research studies, related articles in music periodicals and journals, recommended standards of training for music education majors, and advice from music teachers.

A tabulation of the information collected from these sources indicated a need for clarification of the relationship between piano skills taught and piano skills actually used by music education majors. In an

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[3]Recommended by William A. Powers and John C. Busch, The University of North Carolina at Greensboro, Greensboro, North Carolina, 16 April 1976.

TABLE 1

NORTH CAROLINA MUSIC TEACHERS BY CATEGORY
AND PROPORTIONATE SAMPLINGS

Category	Population		Adjusted Questionnaire Sample	Adjusted Visitation Sample	Adjusted Actual Visitation Sample
	Number	Proportion			
Band	335	.25	68	17	12
Choral	302	.22	60	15	13
Elementary	513	.38	103	26	24
General	139	.10	27	7	6
Orchestra	67	.05	20*	3	3
Total	1,356	1.00	278**	68***	58

* Each cell must include at least 20 for statistical analysis.

** Approximately 20 percent of the total population.

*** Adjusted visitation sample must include no fewer than 5 percent of total population.

attempt to investigate this relationship, items were included into the questionnaire in order to elicit the following information:

1. General training (degrees and/or certification)
2. Teaching experiences, including number of years taught and areas of specialization
3. Piano training before and during college
4. Availability, condition, and percentage of time the piano is used in teaching
5. Piano skills emphasized in piano training and skills emphasized in teaching
6. Piano literature studied in college and used in teaching

The questionnaire was mailed, accompanied by a cover letter (See Appendix C) to 278 music teachers. Of the 278 questionnaires mailed, a total of 207 or 74 percent were returned. Twenty-three questionnaires were judged unsuitable for inclusion in the study due to incomplete information. Therefore, a total of 184 or 66 percent questionnaires were used, including the following categories: band, 45 (67 percent); choral, 37 (62 percent); elementary, 66 (65 percent); general, 25 (93 percent); and orchestra, 11 (57 percent).

To evaluate the participants' piano skills in the teaching situation, a rating sheet was constructed. This rating sheet was employed to obtain observational data from classroom visitation. Evaluation of audible skills was completed in the areas of accuracy, rhythm, phrasing, dynamics, pedaling, improvisation, chord progressions, and accompanying. Participants were rated in each area on a five-point scale with number one indicating superior and number five indicating poor. In addition to the direct observation, tape recordings were made of the teaching sessions

in which the piano was used. In addition to the researcher's personal evaluation, each recorded teaching session was evaluated by two music specialists. The specialists selected to evaluate the piano skills of the music teachers were persons directly acquainted with teaching piano skills to music education majors. Both had served as adjudicators, taught class piano to music education majors, and had been associated with teaching piano for more than fifteen years.

Statistical Procedures

Statistical analysis of data was computed by means of the Spearman rank order correlation coefficient and the chi square test. All responses to the questionnaire were hand scored and placed on charts. Responses of the participants to specific sections of the questionnaire, concerning teaching experience and piano training, were recorded as percentage data. An analysis of the data appears in Chapter Four in tabulated form. The Spearman rank order correlation coefficient was employed to:

1. Compare the skills most stressed in piano study (as reported by the subject in the questionnaire) with the skills most frequently demonstrated in teaching (as reported by the subject in the questionnaire).

2. Compare the skills most stressed in piano study (as reported by the subject in the questionnaire) with the skills most frequently demonstrated in teaching (as audible skills observed and tape recorded by the researcher).

3. Compare the skills most used in teaching (as reported by the subject in the questionnaire) with actual performance level used in the teaching situation (as audible skills observed and tape recorded by the researcher).

The chi square technique was employed to:

1. Compare the area of specialization with the utilization of the piano in the teaching situation in order to determine any relationship existing between the two.

2. Compare the piano literature studied with the percentage of classroom time the college piano literature was used in order to determine if teachers utilized only that piano literature.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

Findings presented in this chapter were obtained from an analysis of 184 questionnaires and 58 direct observations of selected North Carolina public school music teachers. The information collected from the questionnaire was categorized as general education, teaching experiences, piano training, use of piano, piano skills emphasized, and piano literature. Data collected from the rating sheet were classified as rating sheet performance skills or as supplementary information. Data included examples of compositions played and the amount of time the piano was used for instructional purposes. Statistical analysis was computed through use of the Statistical Analysis System (SAS), Correlation Program,[1] at the Triangle Universities Computer Center, Research Triangle Park, North Carolina.

General Education

Of the fourteen different college degrees held by the 184 respondents, the most frequently listed degree was the Bachelor of Music Education (24.5 percent). The next most frequently listed degree was the Bachelor of Arts (15.8 percent). The Master of Arts was the most frequently listed graduate degree (12.5). Of the 184 respondents, two were listed as holding the Doctor of Philosophy degree.

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[1]Anthony James Barr and James Howard Goodnight, Statistical Analysis System (SAS) Manual (Raleigh, North Carolina: North Carolina State University, 1970).

Within the elementary, choral, and general categories, the most frequently listed degree was the Bachelor of Music Education. The Master of Arts was most often listed within the band category, and the Bachelor of Music and Master of Music degrees were most often listed within the orchestra category. Doctoral degrees were held by one band and one choral respondent (Table 2).

As shown in Table 3, 75.5 percent of the respondents held an A Certificate and 24.5 percent held a G Certificate. Certification at the graduate level was listed more frequently by the respondents in the band category. Respondents in each of the five teaching categories indicated that they were trained in more than one area of specialty (Table 4). More than one-half of the respondents were trained to teach music in grades K-12. Fewer were trained to teach in the instrumental field than in any of the other four categories (2.2 percent). Each respondent listed one instrument as a principal performance medium during college training. While 20 different instruments were named as performing media, the most frequently listed was the piano. Table 5 shows that, within the elementary and general teaching categories, the piano was the most frequently listed principal instrument in college. Respondents in the orchestra category listed violin as being the principal instrument; those in the band category listed trumpet as being the principal instrument, and respondents in the choral category listed voice as their principal performing medium. Instruments most often listed as having been the principal performing media in college were piano, voice, trumpet, clarinet, and trombone. Those least often reported were cornet, flute, guitar, and double bass.

TABLE 2

ADVANCED COLLEGE DEGREES OF RESPONDENTS BY TEACHING CATEGORY

College Degree Held	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Undergraduate												
Bachelor of Arts	4	8.9	8	21.7	12	18.1	5	20.0	-	-	29	15.8
Bachelor of Arts in Music Education	-	-	-	-	4	6.1	-	-	-	-	4	2.2
Bachelor of Music	2	4.4	4	10.8	9	13.6	2	8.0	3	27.3	20	10.9
Bachelor of Music Education	11	24.0	9	24.3	13	19.7	10	40.0	2	18.2	45	24.5
Bachelor of Science	3	6.7	5	13.5	12	18.1	3	12.0	-	-	23	12.5
Bachelor of Science in Music	-	-	-	-	-	-	-	-	2	18.2	2	1.1
Bachelor of Science in Music Education	-	-	-	-	5	7.6	-	-	-	-	5	2.7
Graduate												
Master of Arts	12	26.7	7	19.0	3	4.5	1	4.0	-	-	23	12.5
Master of Arts in Music Education	-	-	-	-	2	3.0	-	-	-	-	2	1.1
Master of Education	-	-	-	-	2	3.0	-	-	-	-	2	1.1
Master of Music	5	11.1	2	5.4	4	6.1	2	8.0	3	27.3	16	8.7
Master of Music Education	7	15.6	1	2.7	-	-	1	4.0	-	-	9	4.9
Master of Science	-	-	-	-	-	-	1	4.0	1	9.1	2	1.1
Doctor of Philosophy	1	2.2	1	2.7	-	-	-	-	-	-	2	1.1
Total	45		37		66		25		11		184	

TABLE 3

TEACHING CERTIFICATION OF RESPONDENTS BY TEACHING CATEGORY

Present Teaching Certification	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A Certificate	25	55.6	29	78.4	54	81.8	23	92.0	8	72.7	139	75.5
G Certificate	20	44.4	8	21.6	12	18.2	2	8.0	3	27.3	45	24.5
Total	45		37		66		25		11		184	

TABLE 4

AREAS OF TEACHING SPECIALTY OF RESPONDENTS*
BY TEACHING CATEGORY

Area of Teaching Specialty	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
K - 12	21	46.7	27	72.9	24	36.4	22	88.0	7	63.6	101	54.9
Band	12	26.7	2	5.4	15	22.7	5	20.0	3	27.3	37	20.1
Elementary	4	8.9	9	24.3	19	28.8	-	-	-	-	32	17.4
Choral	3	6.7	13	35.1	8	12.1	3	12.0	-	-	27	14.7
Orchestra	11	24.4	-	-	3	4.5	-	-	5	45.5	19	10.3
General	-	-	2	5.4	10	15.2	-	-	1	9.1	13	7.1
K - 8	-	-	-	-	5	7.6	4	16.0	-	-	9	4.9
6 - 12	3	6.7	2	5.4	-	-	-	-	-	-	5	2.7
Instrumental	-	-	-	-	-	-	-	-	4	36.4	4	2.2
Total	54		55		84		34		20		247	
Category Base	45		37		66		25		11		184	

* Respondents checked more than one area of teaching specialty.

TABLE 5

PRINCIPAL INSTRUMENTS OF RESPONDENTS BY TEACHING CATEGORY

Principal Instruments	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Baritone horn	2	4.4	-	-	-	-	-	-	-	-	2	1.1
Clarinet	7	15.6	-	-	-	-	2	8.0	-	-	9	4.9
Cornet	1	2.2	-	-	-	-	-	-	-	-	1	.5
Euphonium	3	6.7	-	-	-	-	-	-	-	-	3	1.6
Flute	-	-	-	-	1	1.5	-	-	-	-	1	.5
French horn	4	8.9	2	5.4	-	-	1	4.0	-	-	7	3.8
Guitar	-	-	-	-	1	1.5	-	-	-	-	1	.5
Oboe	2	4.4	-	-	-	-	-	-	-	-	2	1.1
Organ	-	-	3	8.1	3	4.5	-	-	-	-	6	3.3
Piano	1	2.2	14	37.8	40	60.6	11	44.0	2	18.2	68	37.0
Saxaphone	4	8.9	-	-	-	-	-	-	-	-	4	2.2
Stringed bass	1	2.2	-	-	-	-	-	-	-	-	1	.5
Trombone	5	11.1	1	2.7	1	1.5	1	4.0	-	-	8	4.3
Trumpet	9	20.0	1	2.7	1	1.5	-	-	1	9.1	12	6.5
Tuba	3	6.7	-	-	-	-	-	-	-	-	3	1.6
Viola	-	-	-	-	-	-	-	-	2	18.2	2	1.1
Violin	-	-	-	-	-	-	1	4.0	4	36.4	5	2.7
Violoncello	-	-	1	2.7	-	-	-	-	2	18.2	3	1.6
Vocal music	-	-	-	-	-	-	9	36.0	-	-	9	4.9
Voice	3	6.7	15	40.5	19	28.8	-	-	-	-	37	20.1
Total	45		37		66		25		11		184	

Teaching Experiences

The range of teaching experience was from one to twenty-nine years, as shown in Table 6. Nearly one-half of the respondents had taught from 1-5 years (44.6 percent), but 9.2 percent reported having taught more than twenty years. Of the 184 respondents, 39.7 reported having taught general music; 37.5 percent indicated they had taught band. The choral field was listed most often as an area in which the respondents had taught (Table 7). Areas of teaching least often listed were K-9, piano and organ, junior high vocal, and K-3.

Piano Training

Of the 184 respondents, 25.0 percent reported they had received 4-6 years of private piano training prior to college; 22.3 percent reported having received 7-9 years prior to college; and 18.5 percent reported having received 10-12 years of training before entering college. Only six percent reported having received class piano before entering college. Those respondents who reported having received no piano training prior to college were categorized most often as teachers of band (Table 8).

Table 9 shows that respondents received college piano training on the semester system more often than on the quarter system, and that they received more private than class training. Of the five teaching categories, respondents in the band category reported a higher incidence of piano study on the college level. Five of the respondents reported having been exempt from college piano study on the basis of existing skills; ten reported having been allowed to choose an alternate instrument. (A complete listing

TABLE 6

YEARS OF TEACHING EXPERIENCE OF RESPONDENTS BY TEACHING CATEGORY

Years of Teaching	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1 - 5	13	28.9	13	35.1	31	47.0	18	72.0	7	63.6	82	44.6
6 - 10	12	26.7	12	32.4	13	19.7	2	8.0	-	-	39	21.2
11 - 15	6	13.3	4	10.8	10	15.2	2	8.0	1	9.1	23	12.5
16 - 20	7	15.6	5	13.5	7	10.6	3	12.0	1	9.1	23	12.5
21 - 25	6	13.3	2	5.4	2	3.0	-	-	2	18.2	12	6.5
26 - 30	1	2.2	1	2.7	3	4.5	-	-	-	-	5	2.7
Total	45		37		66		25		11		184	

TABLE 7

AREAS OF MUSIC TAUGHT BY TEACHING CATEGORY*

Areas of Music Taught	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Choral	20	44.4	37	100.0	37	56.1	19	76.0	3	27.3	116	63.0
General	7	16.5	17	45.9	21	31.8	25	100.0	3	27.3	73	39.7
Band	45	100.0	9	24.3	7	10.6	6	24.0	2	18.2	69	37.5
Elementary	-	-	2	5.4	39	59.6	1	4.0	2	18.2	44	23.9
K - 12	5	11.1	8	21.6	13	19.7	3	12.0	-	-	29	15.8
Orchestra	13	28.9	1	2.7	-	-	1	4.0	11	100.0	26	14.1
K - 8	-	-	-	-	14	21.2	1	4.0	-	-	15	8.2
Piano	1	2.2	10	27.0	-	-	4	16.0	-	-	15	8.2
Theory	9	20.0	2	5.4	-	-	2	8.0	-	-	13	7.1
Music appreciation	4	8.9	3	8.1	-	-	2	8.0	-	-	9	4.9
Voice	-	-	5	13.5	-	-	-	-	1	9.1	6	3.3
Guitar	1	2.2	1	2.7	-	-	3	12.0	-	-	5	2.7
Strings	3	6.7	-	-	-	-	-	-	2	18.2	5	2.7
K - 9	-	-	-	-	-	-	3	12.0	-	-	3	1.6
Piano and organ	-	-	2	5.4	-	-	-	-	1	9.1	3	1.6
Junior high vocal	-	-	-	-	-	-	-	-	1	9.1	1	.5
K - 3	-	-	-	-	-	-	1	4.0	-	-	1	.5
Total	108		97		131		71		26		433	
Category Base	45		37		66		25		11		184	

* Respondents checked more than one area of music taught.

TABLE 8

YEARS OF PIANO TRAINING PRIOR TO COLLEGE*

Years of Training	Band						Choral						Elementary					
	Private		Class		None		Private		Class		None		Private		Class		None	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	-	-	-	-	18	40.0	-	-	-	-	3	8.1	-	-	-	-	1	1.5
1 - 3	15	33.3	3	6.7	-	-	2	5.4	-	-	-	-	9	13.6	3	4.5	-	-
4 - 6	10	22.2	-	-	-	-	12	32.4	-	-	-	-	18	27.3	1	1.5	-	-
7 - 9	2	4.4	-	-	-	-	12	32.4	-	-	-	-	17	25.8	-	-	-	-
10 - 12	-	-	-	-	-	-	7	19.0	-	-	-	-	20	30.3	-	-	-	-
13 - 15	-	-	-	-	-	-	1	2.7	-	-	-	-	1	1.5	-	-	-	-
Total	27		3		18		34				3		65		4		1	
Category Base	45						37						66					

TABLE 8--Continued

Years of Training	General						Orchestra						Total					
	Private		Class		None		Private		Class		None		Private		Class		None	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	-	-	-	-	2	8.0	-	-	-	-	1	9.1	-	-	-	-	25	13.6
1 - 3	3	12.0	-	-	-	-	6	54.5	1	9.0	-	-	35	19.0	7	3.8	-	-
4 - 6	4	16.0	3	12.0	-	-	2	18.2	-	-	-	-	46	25.0	4	2.2	-	-
7 - 9	8	32.0	-	-	-	-	2	18.2	-	-	-	-	41	22.3	-	-	-	-
10 - 12	7	28.0	-	-	-	-	-	-	-	-	-	-	34	18.5	-	-	-	-
13 - 15	1	4.0	-	-	-	-	-	-	-	-	-	-	3	1.6	-	-	-	-
Total	23		3		2		10		1		1		159		11		25	
Category Base	25						11						184					

* Percentages based on sample population within each teaching category.

TABLE 9

KINDS OF PIANO TRAINING IN COLLEGE FOR 184 RESPONDENTS
BY SEMESTERS AND QUARTERS

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	14	-	-	1
1 - 3	26	19	-	10	10	-
4 - 6	38	5	-	19	6	-
7 - 9	45	1	-	15	3	-
10 - 12	9	-	-	11	1	-
13 - 15	-	-	-	-	-	-
16 - 18	1	-	-	-	-	-
Total	119	25	14	55	20	1

of teaching categories with kinds of piano training received in college by semesters/quarters reported by respondents in each category can be found in Appendix D.). The instrument most often listed as an alternate, or substitute, was the organ (Table 10).

Use of Piano

Table 11 shows that 40.8 percent of the respondents indicated that the piano was used in their teaching situation 1-20 percent of the time. All respondents indicated that they used the piano at some time in the teaching situation; one reported having used the recorder and the autoharp, and one reported having used the guitar and the tuned bells. Table 12 indicates that 71.8 percent of the respondents reported that a piano was available for use 100 percent of the time. Those in the choral category reported having most access to the use of the piano. Respondents in all categories reported that the piano was available at least 1-24 percent of the time.

Respondents in the orchestra category were the only group reporting the condition of their pianos as average or above. Those in other categories classified pianos in their teaching situations from poor to excellent (Table 13). Of the 184 respondents, 35.3 percent indicated having access to an accompanist whose piano skills were comparable to those of the respondent. Teachers in the band category reported the greatest availability of an accompanist, and teachers in the general category indicated the least.

TABLE 10

REASONS FOR PIANO EXEMPTION IN COLLEGE

Reasons for Piano Exemption	Band	Choral	Elementary	General	Orchestra	Total
Adequate skills	-	1	2	2	-	5
Substitution	-	2	3	2	3	10
Others	-	-	-	-	-	-
Total	-	3	5	4	3	15

TABLE 11

AMOUNT OF TIME SPENT PLAYING THE PIANO IN TEACHING ASSIGNMENT

Percentage of Time	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1	-	-	-	-	-	-	-	-	-	-	-	-
1 - 20	32	71.1	7	18.9	26	39.4	8	32.0	2	18.2	75	40.8
21 - 40	11	24.4	5	13.5	14	21.2	5	20.0	4	36.4	39	21.2
41 - 60	2	4.4	5	13.5	5	7.6	6	24.0	3	27.3	21	11.4
61 - 80	-	-	7	18.9	9	13.6	5	20.0	-	-	21	11.4
81 or more	-	-	13	35.1	12	18.1	1	4.8	2	18.2	28	15.2
Total	45		37		66		25		11		184	

TABLE 12

PERCENTAGE OF CLASSROOM TIME AVAILABLE FOR USE OF PIANO

Percentage of Classroom Time	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	-	-	-	-	-	-	-	-	-	-	-	-
1 - 24	7	15.6	-	-	13	19.7	1	4.0	-	-	21	11.4
25 - 49	2	4.4	-	-	4	6.1	1	4.0	-	-	7	3.9
50 - 74	2	4.4	-	-	6	9.1	1	4.0	-	-	9	4.9
75 - 99	4	8.9	1	2.7	5	7.6	2	8.0	3	27.3	15	8.2
100	30	66.7	36	97.3	38	57.6	20	80.0	8	72.8	132	71.8
Total	45		37		66		25		11		184	

TABLE 13

RATINGS OF PIANO FOR INSTRUCTIONAL USE

	Band		Choral		Elementary		General		Orchestra		Total	
Rating	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Excellent	9	20.0	7	18.9	11	16.7	5	20.0	-	-	32	17.4
Above average	6	13.3	12	32.4	14	21.2	5	20.0	4	36.4	41	22.2
Average	22	48.9	11	29.8	29	43.9	13	52.0	7	63.7	82	44.6
Below average	5	11.1	5	13.6	6	9.1	-	-	-	-	16	8.7
Poor	3	6.7	2	5.4	6	9.1	2	8.0	-	-	13	7.1
Total	45		37		66		25		11		184	

Piano Skills Emphasized

In ranking the 19 skills most emphasized in piano training, a mean was computed for each of the piano skills. The lower mean values, such as 2.52 and 4.69, represent skills most emphasized; while higher mean values, such as 15.93 and 15.78, represent skills least emphasized in the teaching situation. The mean rankings of the piano skills are presented in Table 14.

An analysis of the data revealed rank differences among the teaching categories. The following five skills were ranked as the most emphasized by respondents in each of the teaching categories:

1. Band category
    a. Note accuracy (4.69)
    b. Fingering (5.07)
    c. Scales (5.13)
    d. Technique (5.87)
    e. Rhythms (7.24)
2. Choral category
    a. Note accuracy (4.57)
    b. Rhythms (4.78)
    c. Fingering (5.43 and technique (5.43)
    d. Phrasing (5.78)
    e. Scales (6.38)
3. Elementary category
    a. Note accuracy (3.54)
    b. Fingering (5.09)
    c. Rhythms (5.21)

TABLE 14

MEAN RANKINGS OF SKILLS EMPHASIZED IN PIANO TRAINING

Piano Skill	Band	Choral	Elementary	General	Orchestra	Overall Mean	Rank
Accompanying	11.82	11.43	11.68	10.16	11.55	11.45	12
Chord progressions	9.44	11.65	10.17	10.44	11.00	10.38	11
Chords	8.38	8.78	9.44	9.52	9.18	9.04	9
Compositions	12.40	10.43	12.53	13.40	10.54	12.08	14
Dynamics	9.24	7.41	7.42	7.80	7.82	7.94	7
Ensemble playing	14.40	15.24	15.33	15.16	14.73	15.03	17
Fingering	5.07	5.43	5.09	6.20	6.55	5.39	2
Harmonization of a melody	10.51	12.59	12.00	11.72	10.91	11.65	13
Improvisation	15.78	16.05	16.39	16.68	14.55	16.10	18
Note accuracy	4.69	4.57	3.54	2.52	5.09	3.98	1
Open score reading	14.07	14.92	14.64	13.80	16.91	14.58	16
Pedaling	10.71	8.86	8.29	9.48	9.55	9.23	10
Phrasing	8.64	5.78	6.36	6.56	6.55	6.84	6
Rhythms	7.24	4.78	5.21	4.80	5.45	5.58	3
Scales	5.13	6.38	5.71	6.56	3.55	5.69	4
Score reduction	15.93	16.27	16.77	16.16	15.72	16.32	19
Sight reading	7.69	8.84	9.09	7.04	8.09	8.36	8
Technique	5.87	5.43	5.51	6.32	6.36	5.74	5
Transposition	13.13	14.57	14.21	15.08	14.82	14.17	15

d. Technique (5.51)

e. Scales (5.71)

4. General category

a. Note accuracy (2.52)

b. Rhythms (4.80)

c. Fingering (6.20)

d. Technique (6.32)

e. Phrasing (6.56)

5. Orchestra category

a. Scales (3.55)

b. Note accuracy (5.09)

c. Rhythms (5.45)

d. Technique (6.36)

e. Fingering (6.55)

The following five piano skills were ranked by the respondents as the least emphasized during their college training:

1. Band category

a. Score reduction (15.93)

b. Improvisation (15.78)

c. Open score reading (14.07)

d. Ensemble playing (14.40)

e. Transposition (13.13)

2. Choral category

a. Score reduction (16.27)

b. Improvisation (16.05)

c. Ensemble playing (15.24)

d. Open score reading (14.92)

e. Transposition (14.57)

3. Elementary category

a. Score reduction (16.77)

b. Improvisation (16.39)

c. Ensemble playing (15.33)

d. Open score reading (14.64)

e. Transposition (14.21)

4. General category

a. Improvisation (16.68)

b. Score reduction (16.16)

c. Ensemble playing (15.16)

d. Transposition (15.08)

e. Open score reading (13.80)

5. Orchestra category

a. Open score reading (16.91)

b. Score reduction (15.72)

c. Transposition (14.82)

d. Ensemble playing (14.73)

e. Improvisation (14.55)

An overall mean for the teaching categories was found for each of the piano skills. The 19 skills emphasized in piano training are presented in rank order:

1. Note accuracy (3.98)

2. Fingering (5.39)

3. Rhythms (5.58)

4. Scales (5.69)
5. Technique (5.74)
6. Phrasing (6.84)
7. Fingering (7.94)
8. Sight reading (8.36)
9. Chords (9.04)
10. Pedaling (9.23)
11. Chord progressions (10.38)
12. Accompanying (11.45)
13. Harmonization of a melody (11.65)
14. Compositions (12.08)
15. Transposition (14.17)
16. Open score reading (14.58)
17. Ensemble playing (15.03)
18. Improvisation (16.10)
19. Score reduction (16.32)

In Table 15, the piano skills emphasized in teaching were ranked by using the means. Means having the lowest values represent the skills most emphasized in teaching; greater values represent least emphasized skills in teaching.

The five piano skills most emphasized in college by respondents in each of the teaching categories were:

1. Band category
    a. Note accuracy (5.95)
    b. Chords (6.00)
    c. Chord progressions (6.14)

TABLE 15

MEAN RANKINGS OF PIANO SKILLS EMPHASIZED IN TEACHING

Piano Skill	Band	Choral	Elementary	General	Orchestra	Overall Mean	Rank
Accompanying	6.38	5.68	7.45	9.76	5.45	7.13	4
Chord progressions	6.14	7.16	8.70	7.56	6.09	7.65	6
Chords	6.00	5.51	6.32	6.20	5.09	5.99	1
Compositions	10.33	14.81	12.53	14.60	14.45	13.23	16
Dynamics	9.62	8.78	8.86	9.24	12.27	9.24	9
Ensemble playing	13.81	13.84	12.73	14.48	12.09	13.36	18
Fingering	11.14	11.24	9.44	10.28	12.73	10.44	11
Harmonization of a melody	9.38	9.16	9.41	9.20	6.27	9.10	8
Improvisation	12.95	11.57	12.59	11.68	10.82	12.14	13
Note accuracy	5.95	7.38	4.85	6.52	9.36	6.15	2
Open score reading	13.19	12.70	14.06	13.36	9.73	13.23	17
Pedaling	13.71	13.32	12.03	12.20	14.55	12.75	15
Phrasing	10.62	7.92	8.68	8.76	10.27	8.88	7
Rhythms	7.48	6.73	6.29	5.28	8.54	6.55	3
Scales	9.05	11.35	11.45	8.76	9.73	10.58	12
Score reduction	13.66	12.46	14.79	12.72	10.73	13.50	19
Sight reading	8.48	7.14	6.92	7.16	7.64	7.26	5
Technique	9.48	9.97	10.41	9.44	11.36	10.10	10
Transposition	11.33	12.78	12.24	12.60	12.27	12.31	14

d. Accompanying (6.38)

e. Rhythms (7.48)

2. Choral category

a. Chords (5.51)

b. Accompanying (5.68)

c. Rhythms (6.73)

d. Sight reading (7.14)

e. Chord progressions (7.16)

3. Elementary category

a. Note accuracy (4.85)

b. Rhythms (6.29)

c. Chords (6.32)

d. Sight reading (6.92)

e. Accompanying (7.45)

4. General category

a. Rhythms (5.28)

b. Chords (6.20)

c. Note accuracy (6.52)

d. Sight reading (7.16)

e. Chord progressions (7.56)

5. Orchestra category

a. Chords (5.09)

b. Accompanying (5.45)

c. Chord progressions (6.09)

d. Harmonization of a melody (6.27)

e. Sight reading (7.64)

The five piano skills listed as least emphasized in college by teaching categories were:

1. Band category
    a. Ensemble playing (13.81)
    b. Pedaling (13.71)
    c. Score reduction (13.66)
    d. Open score reading (13.19)
    e. Improvisation (12.95)
2. Choral category
    a. Compositions (14.81)
    b. Ensemble playing (13.84)
    c. Pedaling (13.32)
    d. Transposition (12.78)
    e. Open score reading (12.70)
3. Elementary category
    a. Score reduction (14.79)
    b. Open score reading (14.06)
    c. Ensemble playing (12.73)
    d. Improvisation (12.59)
    e. Compositions (12.53)
4. General category
    a. Compositions (14.60)
    b. Ensemble playing (14.48)
    c. Open score reading (13.36)
    d. Score reduction (12.72)
    e. Transposition (12.60)

5. Orchestra category
    a. Pedaling (14.55)
    b. Compositions (14.45)
    c. Fingering (12.73)
    d. Dynamics (12.27) and transposition (12.27)
    e. Ensemble playing (12.09)

An overall mean was computed from the teaching categories and ranked in order of emphasis. The ranked piano skills listed as emphasized in the teaching situation are presented below:

1. Chords (5.99)
2. Note accuracy (6.15)
3. Rhythms (6.55)
4. Accompanying (7.13)
5. Sight reading (7.26)
6. Chord progressions (7.65)
7. Phrasing (8.88)
8. Harmonization of a melody (9.10)
9. Dynamics (9.24)
10. Technique (10.10)
11. Fingering (10.44)
12. Scales (10.58)
13. Improvisation (12.14)
14. Transposition (12.31)
15. Pedaling (12.75)
16. Compositions (13.23)
17. Open score reading (13.23)

18. Ensemble playing (13.36)

19. Score reduction (13.50)

To determine the degree of relationship between "piano skills most emphasized in piano training" and "piano skills most frequently emphasized in teaching," the Spearman rank order correlation coefficient was computed. Table 16 shows the correlation coefficient for each piano skill, by teaching category, and the corresponding level of significance.

Analysis of the data revealed a significant correlation between specific skills emphasized in training and in teaching. Skills shown to be significant at the .05 level are as follows:

1. Choral category
    a. Note accuracy
    b. Pedaling
2. Elementary category
    a. Compositions
    b. Dynamics
    c. Ensemble playing
    d. Rhythms
3. General category
    a. Accompanying
    b. Scales
    c. Transposition

An overall correlation coefficient for the five teaching categories showed significant relationships between the following specific piano skills as emphasized in training and in teaching:

1. Compositions
2. Dynamics

TABLE 16

SPEARMAN RANK ORDER CORRELATION COEFFICIENTS BETWEEN PIANO SKILLS EMPHASIZED IN TRAINING AND TEACHING

Piano Skill	Band	Choral	Elementary	General	Orchestra	Overall Correlation
Accompanying	.30173	-.11112	.19950	.41576*	-.57157	.09956
Chord progressions	-.08281	-.05403	-.11150	.15231	.06075	-.05164
Chords	-.10806	.19673	-.06107	.22334	.18203	.06522
Compositions	-.00658	.20721	.30027**	.33307	-.02088	.18787**
Dynamics	-.03461	.05755	.24951*	.20966	-.10233	.16059*
Ensemble playing	-.22618	.20545	.30004**	.15190	.27843	.18299*
Fingering	-.01560	.03590	.07321	.33450	.05622	.13899
Harmonization of a melody	-.08210	.24611	-.10312	.04732	.09677	.01623
Improvisation	-.09229	.24471	.03586	.35243	.17742	.15599*
Note accuracy	.37535	.40338**	.13605	.19251	.39495	.29584**
Open score reading	.15638	.10513	.14771	.32383	.28441	.13633
Pedaling	-.15293	.40180**	.02960	.16864	.54253	.17162*
Phrasing	.33769	.07793	.09203	.30642	.02797	.14388
Rhythms	.10787	.04522	.25945*	.23960	-.10876	.21436**
Scales	-.23499	.00885	-.14061	.40074*	.09029	.01257
Score reduction	.24776	.20442	.02658	.16904	.24944	.18551**
Sight reading	.06122	.17364	.03600	.17171	-.07390	.07479
Technique	.20231	.05995	-.14933	.02619	.28842	-.01916
Transposition	.39869	-.06315	.05590	.42255*	-.20663	.11997

* Significant at the .05 level.

** Significant at the .01 level.

3. Ensemble playing
4. Improvisation
5. Note accuracy
6. Pedaling
7. Rhythms
8. Score reduction

Table 17 shows that 36.4 percent of the respondents reported using the piano at least 81 percent of the time in studying scores. The piano was used in this capacity most often by those in the choral category and least often by those in the band category.

Piano Literature

From a list of nine selections, the respondents were asked to check those selections that they had played or selections that compared in difficulty with other pieces that they had played (Table 18). The selection that was most frequently checked as having been played by members from all five groups was Bach's short Preludes or Inventions. Of the 184 respondents, 75.5 percent indicated that they had played compositions from those publications. Chopin's easier Preludes was the next most frequently checked selection.

Sixty-eight percent of the choral group reported that they had played both the Chopin easier Preludes and the Clementi Sonatinas Opus 36; 45.5 percent of those in the orchestra category reported that they had played the Bartok Mikrokosmos, Book I, and the Chopin easier Preludes. Within the band and elementary categories, the selection least often checked as having been played was the Kabalevsky Opus 27. Within the

TABLE 17

PERCENTAGE OF TIME THE PIANO IS USED IN STUDYING MUSIC SCORES

Percentage of Time	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	-	-	1	2.7	11	16.7	-	-	-	-	12	6.5
1 - 20	19	42.2	1	2.7	13	19.7	7	28.0	2	18.2	42	22.8
21 - 40	6	13.3	1	2.7	8	12.1	2	8.0	2	18.2	19	10.3
41 - 60	7	15.6	1	2.7	10	15.2	2	8.0	1	9.1	21	11.4
61 - 80	2	4.4	9	24.3	6	9.1	3	12.0	3	27.3	23	12.5
81 or more	11	24.4	24	64.9	18	27.3	11	44.0	3	27.3	67	36.4
Total	45		37		66		25		11		184	

TABLE 18

PIANO SELECTIONS OR COMPARABLE SELECTIONS OF DIFFICULTY PLAYED BY RESPONDENTS

Piano Selection	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bach: Book II	14	31.1	18	49.0	36	55.0	11	44.0	2	18.2	81	44.0
Bach: Short Preludes or Inventions	22	49.0	33	89.2	57	86.3	21	84.0	6	55.0	139	75.5
Bartok: Mikrokosmos, Book I	16	36.0	16	43.2	25	38.0	14	56.0	5	45.5	76	41.3
Chopin: Easier Preludes	19	42.2	25	68.0	52	79.0	19	76.0	5	45.5	120	65.2
Clementi: Sonatinas Opus 36	11	24.4	25	68.0	39	59.1	13	52.0	3	27.3	91	49.5
Grieg: Lyrical Pieces	7	15.5	6	16.2	23	35.0	5	20.0	3	27.3	44	24.0
Kabalevsky: Opus 27	1	2.2	7	19.0	12	18.2	5	20.0	4	36.4	29	15.8
Mozart: Viennese Sonatinas	8	18.0	21	57.0	23	35.0	6	24.0	2	18.2	60	33.0
Schumann: Opus 68	8	18.0	16	43.2	23	35.0	6	24.0	3	27.3	56	30.4
Total	106		167		290		100		33		696	
Category Base	45		37		66		25		11		184	

general category, the selections least often checked were the Opus 27 and the Grieg Lyrical Pieces. Teachers in the choral category checked the Lyrical Pieces as selections played with less frequency, and teachers in the orchestra category checked the Mozart Viennese Sonatinas.

Based on 184 respondents, the three most frequently checked selections were (1) Bach short Preludes or Inventions (75.5 percent), (2) Chopin easier Preludes (65.2 percent), and (3) Clementi Sonatinas Opus 36 (49.5 percent). The three selections least checked by the total respondents were the (1) Kabalevsky Opus 27 (15.8 percent), (2) Grieg Lyrical Pieces (24.0 percent), and (3) Schumann Opus 68 (30.4 percent). The obtained data did not meet criteria necessary to compute a chi square; therefore, analysis was not completed.

Table 19 shows that 83.2 percent of the respondents indicated that they did not perform literature that was studied on the college level in their present teaching assignment. Within each of the five teaching categories, more than 50 percent of the respondents reported that they did not use literature they had studied on the college level.

Of the total teaching groups, Table 20 shows that 61.4 percent did not utilize their college piano literature in their teaching; 32.6 percent of the respondents used their college piano literature from 1-20 percent of their classroom time. Only 6 percent used their college piano literature more than 20 percent of their classroom time. Those respondents in the orchestra category indicated that they did not use their college piano literature more than 1-20 percent of their classroom time. One each from the elementary and the general teaching categories used their college piano from 61-80 percent of their classroom time.

TABLE 19

COLLEGE PIANO LITERATURE USED IN TEACHING ASSIGNMENT

Teaching Category	Yes	Percentage	No	Percentage	Total
Band	1	2.2	44	97.7	45
Choral	10	27.0	27	73.0	37
Elementary	14	21.2	52	78.8	66
General	6	24.0	19	76.0	25
Orchestra	-	-	11	100.0	11
Total	31	16.8	153	83.2	184

As presented in Table 21, 91.8 percent of the respondents indicated that they did not find it necessary to practice their college piano literature in preparing for their teaching; 8.2 percent indicated that they did practice their college piano literature in preparing for their teaching. The percentages of negative responses ranged from 88 to 100 percent, while the affirmative ranged from 6.7 to 12.0 percent. The only teaching category with all negative responses was the orchestra category.

Rating Sheet Performance Skills

A rating sheet evaluating piano skills was completed after classroom visitation by the researcher. Participants were rated in the areas of accuracy, rhythm, phrasing, dynamics, pedaling, improvisation, chord progressions, and accompanying. At the time of observation, a tape

TABLE 20

PERCENTAGE OF CLASSROOM TIME USING COLLEGE PIANO LITERATURE

Percentage of Classroom Time	Band		Choral		Elementary		General		Orchestra		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
None	37	82.2	19	51.4	35	53.0	11	44.0	11	100.0	113	64.4
1 - 20	8	17.8	15	40.5	25	37.9	12	48.0	-	-	60	32.6
21 - 40	-	-	2	5.4	4	6.1	-	-	-	-	6	3.3
41 - 60	-	-	1	2.7	1	1.5	1	4.0	-	-	3	1.6
61 - 80	-	-	-	-	1	1.5	1	4.0	-	-	2	1.1
81 or more	-	-	-	-	-	-	-	-	-	-	-	-
Total	45		37		66		25		11		184	

TABLE 21

PRACTICE OF COLLEGE PIANO LITERATURE IN PREPARATION FOR DAILY TEACHING

Teaching Category	Yes	Percentage	No	Percentage	Total
Band	3	6.7	42	93.3	45
Choral	4	10.8	33	89.2	37
Elementary	5	7.6	61	92.4	66
General	3	12.0	22	88.0	25
Orchestra	-	-	11	100.0	11
Total	15	8.2	169	91.8	184

recording of the class session was made; these tapes were later evaluated by two music specialists.

Using the data from the rating sheets, a Spearman rank correlation coefficient was computed to determine the relationship between what the two music specialists and researcher heard on the 58 tapes and reported on the rating sheets and what the 184 respondents reported as to (1) the piano skills most emphasized in training and (2) the piano skills most emphasized in teaching. The two music specialists will be henceforth referred to as Y and Z, and the observer (researcher) as X. The correlation coefficients of the three and the corresponding level of significance will be shown in Tables 22 and 23.

In a comparison of the selected audible skills emphasized in piano training by X, Y, and Z, each correlation coefficient was found to be significant at the .01 level. Since the correlations of X, Y, and Z were extremely high, a computed average of X, Y, and Z's ratings was used in determining the relationship with the audible skills stressed in piano study (Table 24) and with the audible skills stressed in piano teaching (Table 25).

The relationship between what the respondents reported as skills emphasized in training and what X, Y, and Z heard was not significant. However, there was a high correlation between what the respondents reported they used in the teaching situation and what X, Y, and Z heard. Each of the eight overall correlation coefficients was found to be significant at the .01 level.

TABLE 22

CORRELATION COEFFICIENTS OF OBSERVER (X) AND THE TWO MUSIC SPECIALISTS (Y AND Z)

Selected Audible Skills Emphasized in Piano Training	X and Y	X and Z	Y and Z
Accuracy	.94655**	.94877**	.93782**
Rhythm	.90733**	.90885**	.87273**
Phrasing	.89729**	.94893**	.89791**
Dynamics	.83080**	.91705**	.84132**
Pedaling	.82450**	.98570**	.80183**
Improvisation	.74663**	.98808**	.73343**
Chord progressions	.78958**	.91462**	.82592**
Accompanying	.87904**	.90941**	.82674**

** Significant at .01 level.

TABLE 23

CORRELATION COEFFICIENTS OF OBSERVER (X) AND THE TWO MUSIC SPECIALISTS (Y AND Z)

Selected Audible Skills Emphasized in Piano Teaching	X and Y	X and Z	Y and Z
Accuracy	.96697**	.94419**	.94390**
Rhythm	.94532**	.90366**	.93236**
Phrasing	.94481**	.94883**	.95645**
Dynamics	.94833**	.92404**	.93090**
Pedaling	.99687**	.98656**	.98229**
Improvisation	.98873**	.98808**	.97783**
Chord progressions	.94879**	.92171**	.94919**
Accompanying	.92698**	.91642**	.95298**

** Significant at .01 level.

TABLE 24

CORRELATION COEFFICIENTS BETWEEN SELECTED AUDIBLE SKILLS EMPHASIZED IN PIANO TRAINING AND AVERAGE X-Y-Z RANK

Selected Audible Skills Emphasized in Piano Training	Band	Choral	Elementary	General	Orchestra	Overall Coefficient
Accuracy	.29699	-.07314	-.00913	.06172	.00000	.06487
Rhythm	-.09217	-.31870	.07726	.79412	.00000	.04949
Phrasing	.12874	-.38044	-.18888	.57926	-.50000	-.04601
Dynamics	.03066	.27762	.15756	.52179	.50000	.21312
Pedaling	-.04709	.36551	-.28320	.27722	-.86603	-.14498
Improvisations	-.11111	.21409	.35970	.61604	-.86603	.15287
Chord progressions	.35798	.02140	.01900	-.02857	.00000	.03418
Accompanying	-.18938	-.11551	.02287	.55078	.00000	-.11684

TABLE 25

CORRELATION COEFFICIENTS BETWEEN SELECTED AUDIBLE SKILLS EMPHASIZED IN PIANO TEACHING AND AVERAGE X-Y-Z RANK

Selected Audible Skills Emphasized in Piano Teaching	Band	Choral	Elementary	General	Orchestra	Overall Coefficient
Accuracy	.95532**	.78993**	.50613**	.61721	.50000	.65372**
Rhythm	.85410**	.77147**	.44611*	.75370	-.50000	.63848**
Phrasing	.76937**	.76560**	.30452	.98518**	.50000	.63874**
Dynamics	.19636	.51105*	.45455*	.65714	-.50000	.41541**
Pedaling	.81196**	.64682*	.58623**	-.56277	-.86603	.40574**
Improvisations	.64170*	.67723**	.23771	.92763**	.50000	.55084**
Chord progressions	.78788**	.88486**	.46527*	.34786	.00000	.67112**
Accompanying	.82771**	.69715*	.71859**	.92763**	.00000	.75501**

* Significant at .05 level.

** Significant at .01 level.

In the choral category, all of the correlation coefficients were significant at either the .05 or the .01 level (Table 25). In the band category, all correlation coefficients were significant except one, dynamics. Six of the eight correlation coefficients in the elementary category were significant. Three of the eight were significant in the general category. None of the correlation coefficients in the orchestra category reached a level of significance. The mean rankings by X, Y, and Z of piano skills most used in teaching included accuracy (3.47), rhythm (3.48), accompanying (3.63), chord progressions (3.69), phrasing (4.62), dynamics (4.90), improvisation (6.20), and pedaling (6.59).

Supplementary Information

Table 26 shows the use of the piano as observed by the researcher in classroom visitation. Appendix E includes a partial list of the compositions heard in the classroom visitations. The questionnaire used in this study is shown in Appendix A and the rating sheet in Appendix B.

Interpretation of the Data

Data Pertaining to General Education

It should be kept in mind that generalizations must be made with caution in that this study was conducted within one geographical area. Implications cannot be made from the results of the study for public school music teachers outside the State of North Carolina. Findings indicated that assignment of teaching personnel was not necessarily limited by adherence to the existing teaching categories prescribed in publication by the Cultural Arts Division, State Department of Public Instruction,

TABLE 26

TOTAL TIME PIANO USED IN THE OBSERVED TEACHING SITUATION

Teaching Category/Number	Total Class Time	Total Time Piano Used	Percentage of Time Piano Used
Band (12)	9 hrs. 32 mins.	2 hrs. 58 mins.	.31
Choral (13)	9 hrs. 45 mins.	5 hrs. 36 mins.	.57
Elementary (24)	12 hrs. 00 mins.	4 hrs. 41 mins.	.39
General (6)	3 hrs. 00 mins.	1 hr. 2 mins.	.34
Orchestra (3)	2 hrs. 25 mins.	0 hrs. 42 mins.	.29
Total (58)	36 hrs. 42 mins.	14 hrs. 59 mins.	.41

Raleigh, North Carolina. Implications may be drawn that teachers are not necessarily teaching in their area of specialization.

Each respondent reported a principal instrument used as a performing medium. The piano was listed in 37 percent of the cases as the major instrument; voice was the second most frequently listed (20 percent). One possible reason for the greater occurrence of teachers with a piano background could be the fact that most of the respondents had previously studied piano.

Data Pertaining to Teaching Experience

The range of teaching experience was from 1-29 years. Of the 184 respondents, 44.6 percent had taught from one to five years, representing the highest number of frequencies in each of the five categories. One implication may be that the teachers are recent graduates; a second implication could be that schools are developing new programs and securing additional faculty.

The greater number of possible respondents was in the elementary teaching category, an expected occurrence since this was a category that normally serves more student personnel. The smallest number of possible respondents was in the orchestra category. One possible explanation for this fact could be the low incidence of string programs in North Carolina. The fact that respondents in this study had taught in the choral category more than in any of the other four teaching categories included was an expected occurrence, since voice had been the second most reported choice of principal instrument as the performing medium in college.

Data Pertaining to Piano Training

One-fourth of the respondents indicated that they had received from four to six years of private piano training prior to entering college; 42.4 percent reported that they had received from seven to fifteen years of private piano training prior to entering college. Of the total number of 184 respondents, only six percent had received no training in piano. Those respondents in the band category were the largest group to indicate no piano training prior to college. This may be interpreted as an indication that most students who major in music enter college with previous training in piano and that most of those have studied privately, rather in a class.

One hundred seventy-four respondents indicated that they had studied piano privately in college. Forty-five indicated that they had received class training, and 15 reported that no piano training was received in college. Of 15, ten were allowed to substitute another instrument; and five had been exempted due to possessing sufficient skills. All members of the band category studied piano in college. The fact that a substantial number of respondents reported college piano training possibly reflects the attitude that piano was necessary in preparing students for teaching. The fact that few respondents reported having studied class piano serves as an indication of the existence of fewer class piano programs. Of the 15 respondents who received no college training, ten substituted another instrument. Only five respondents were exempted on the basis of present skills, an indication that previous study may not have prepared them to reach the level of proficiency required on the college level.

Data Pertaining to Use of the Piano

More than one-half of the respondents reported that they used the piano less than 50 percent of the time. Since 71.8 percent of the respondents had access to a piano 100 percent of the time, it may be presumed that the substitution of instruments, lack of available accompanists, inadequacy of the respondent as an accompanist, and the condition of the piano were contributing factors in the low incidence of piano use.

Data Pertaining to Piano Skills Emphasized

The 19 skills most emphasized in piano training and teaching were ranked by the 184 respondents. The five skills most emphasized in training by all teaching categories were (1) note accuracy, (2) fingering, (3) rhythm, (4) scales, and (5) technique. The five skills most emphasized in teaching by all categories were (1) chords, (2) note accuracy, (3) rhythm, (4) accompanying, and (5) sight reading. The five skills least emphasized in training by all categories were (1) score reduction, (2) improvisation, (3) sight reading, (4) open score reading, and (5) transposition. The five skills least emphasized in teaching by all groups were (1) score reduction, (2) ensemble playing, (3) open score reading, (4) compositions, and (5) pedaling. The rankings indicate that skills most emphasized in training were not most emphasized in teaching. One possible reason for the difference in emphasis could be that the use of the piano varies with the teaching situation.

To determine whether "piano skills most emphasized in piano training" and "piano skills most frequently emphasized in teaching," the Spearman rank order correlation coefficient was computed. Of the piano skills

emphasized in either piano training or teaching, eight which were reported as having been emphasized in training were also emphasized to the same degree in teaching. Significant relationships were found to exist between the use of compositions as emphasized in training and compositions as used in teaching. Other skills ranked as having received equivalent emphasis in both training and teaching by the respondent and thus reaching a significant level of at least .05 were (1) dynamics, (2) ensemble playing, (3) improvisation, (4) note accuracy, (5) pedaling, (6) rhythm, and (7) score reduction. Less than one-half of the 19 skills emphasized in training or teaching reached a significant level of correlation.

Data Pertaining to Piano Literature

Based on 184 respondents, the three most checked selections studied in college were the Bach short Preludes or Inventions (75.5 percent), the Chopin easier Preludes (65.2 percent), and the Clementi Sonatinas Opus 36 (49.5 percent). The works by Kabalevsky, Grieg, and Schumann were checked least by the respondents.

When asked if piano selections from the literature studied in college were performed in their present teaching assignment, 83.2 percent of the respondents indicated that they did not perform previously learned pieces in their teaching assignment, 61.4 percent did not utilize their college piano literature in their teaching, and 91.8 percent did not find it necessary to practice their college piano literature in preparing for their teaching. Findings indicated that the literature studied in college may be unrelated to the teaching situation.

Data Pertaining to the Rating Sheet

Findings indicated that there was no relationship between skills learned in college and what X, Y, and Z heard. There was a high correlation between what the respondents reported they used in teaching and what skills X, Y, and Z heard (significant at the .01 level). This would indicate that the respondents emphasized the same piano skills in teaching as they had reported in the questionnaire. Data from the rating sheet provided information concerning the amount of time the piano was used during the observer's visitation. The piano was used from 1-20 percent of the time by 40.8 percent of the respondents and was used 54.0 percent of the observed time.

Significance of Hypotheses

The findings relative to the five null hypotheses are presented in the following paragraphs.

1. No significant relationship exists between each of the skills most frequently stressed in piano study and each of the skills most frequently demonstrated in teaching by the respondents. The skills include accompanying, chord progressions, chords, compositions, dynamics, ensemble playing, fingering, harmonization of a melody, improvisation, note accuracy, open score reading, pedaling, phrasing, rhythms, scales, score reduction, sight reading, technique, and transposition. Significant relationships were noted for the following piano skills: compositions, dynamics, ensemble playing, improvisation, note accuracy, pedaling, rhythms, and score reduction. The null hypothesis was rejected at the .05 level for these skills. The null hypothesis for the other 11 piano skills failed to be rejected.

2. No significant relationship exists between each of the audible skills most frequently stressed in piano study by the respondents and each of the audible skills most frequently demonstrated in teaching as evaluated by the music specialists and observer. The audible skills include accuracy, rhythm,

phrasing, dynamics, pedaling, improvisation, chord progressions, and accompanying. No significant relationships were found, so the null hypothesis failed to be rejected.

3. No significant relationship exists between each of the audible skills most frequently demonstrated in teaching by the respondents and each of the audible skills as evaluated by the music specialists and observer. The audible skills are identical to those skills in Hypothesis 2. A significant difference was found for each of the audible skills: accuracy, rhythm, phrasing, dynamics, pedaling, improvisation, chords, progressions, and accompanying. The null hypothesis was rejected.

4. No significant relationship exists between the piano literature studied and the piano literature utilized in teaching. The obtained data did not meet criteria necessary to compute a chi square; therefore, analysis was not completed.

5. No significant relationship exists between the area of specialization and the utilization of the piano in the teaching situation. The obtained data did not meet criteria necessary to compute a chi square; therefore, analysis was not completed.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Introduction

The purpose of this study was to investigate whether the music education teachers in selected public schools in North Carolina demonstrated in their current teaching situations those piano skills which had been stressed in college training. Findings from research studies indicate that many music education programs are less than successful in preparing students to master the competencies needed in actual teaching situations. Some authorities have suggested that courses are poorly organized and study materials are often unrelated to the future needs of students in educational programs. One researcher has concluded that music educators have failed to define precisely what keyboard competencies the undergraduate music education major should possess.

Music education teachers have expressed dissatisfaction with the piano training they have received in college. These teachers expressed concern that a lack of competent piano skills hindered the development of imaginative programs and the fulfillment of course goals in their teaching assignments.

Procedures

Questionnaires were mailed to 278 of the 1,356 music teachers in North Carolina. A total of 184 usable questionnaires were used in the study, representing teachers from the band, choral, elementary, general, and orchestra categories. The questionnaire was designed to elicit relevant information pertaining to teaching experiences, piano skills employed in training and teaching, and the literature studied in college. The information gathered from the questionnaire was classified into these six major categories: (1) general education, (2) teaching experiences, (3) piano training, (4) use of piano, (5) piano skills emphasized, and (6) piano literature.

Fifty-eight North Carolina music teachers (band, choral, elementary, general, and orchestra) certified and teaching in grades K-12 were visited for at least one teaching period. Rating sheets were used in evaluating the participants' piano skills that were demonstrated in the teaching situations. In addition to the direct observation, an audio tape was made to assist a panel of music specialists who would subsequently give evaluations on each recorded teaching session. The rating sheet was also used to collect supplementary information relating to compositions played and actual time (in minutes) the piano was used by the teacher. The data collected from the rating sheet were classified into the following two major categories: (1) rating sheet performance skills, and (2) supplementary information.

In this study the following null hypotheses were investigated:

1. No significant relationship exists between each of the skills most frequently stressed in piano study and each of the skills most

frequently demonstrated in teaching by the respondents.

2. No significant relationship exists between each of the audible skills most frequently stressed in piano study by the respondents and each of the audible skills most frequently demonstrated in teaching as evaluated by the music specialists and observer.

3. No significant relationship exists between each of the audible skills most frequently demonstrated in teaching by the respondents and each of the audible skills as evaluated by the music specialists and observer.

4. No significant relationship exists between the piano literature studied and the piano literature utilized in teaching.

5. No significant relationship exists between the area of specialization and the utilization of the piano in the teaching situation.

Analysis of the Data

Importance of piano skills emphasized in training and observed in teaching was analyzed by the Spearman rank order correlation coefficient statistical procedure. Data from the questionnaire showed that the five most emphasized piano skills in the respondents' training were note accuracy, fingering, rhythm, scales, and technique. The five skills most emphasized in teaching were chords, note accuracy, rhythm, accompanying, and sight reading.

The five skills least emphasized in training were score reduction, improvisation, sight reading, open score reading, and transposition. The five skills least emphasized in teaching were score reduction, ensemble playing, open score reading, compositions, and pedaling.

Significant relationships were found to exist between piano skills emphasized in piano training and skills actually used in the teaching situation. These were in the areas of (1) compositions, (2) dynamics, (3) ensemble playing, (4) improvisation, (5) note accuracy, (6) pedaling, (7) rhythm, and (8) score reduction. There was a high correlation between what the respondents reported they used in teaching and what skills the music specialists and observer heard.

The five hypotheses were tested at the .05 level of significance. Significant relationships were found for the following skills: (1) compositions, (2) dynamics, (3) ensemble playing, (4) improvisation, (5) note accuracy, (6) pedaling, (7) rhythm, and (8) score reduction. Hypothesis 1 was rejected for the eight skills and failed to be rejected for the remaining 11 skills. Hypothesis 2 failed to be rejected. Hypothesis 3 was rejected since all of the correlation coefficients were significant at the .05 level or above. Since data regarding hypotheses 4 and 5 did not meet criteria necessary to compute a chi square; analysis was not completed.

Conclusions

On the basis of the statistical analysis, the information gathered from the questionnaires, rating sheets, and the music specialists' judgments the following conclusions were drawn:

1. As stated previously, certain specific skills stressed in piano study have little relationship to the skills actually used in the teaching situations.

2. Public school music teachers used the piano in their current teaching assignments.

3. Public school music teachers' training in piano both prior to and during college did not prepare them to use the piano in practical application in teaching.

4. Public school music teachers may have received piano training through private or class instructors who emphasized note accuracy, fingering, rhythm, scales, and technique and failed to emphasize pedaling, compositions, open score reading, ensemble playing, and score reduction.

5. Class piano was not being widely utilized in the degree-granting institutions where these teachers received music degrees.

6. Piano literature studied by the public school music teachers in college may be unrelated to their teaching situations.

7. Public school music teachers would possibly utilize the piano more in teaching if piano skills emphasized in college training prepared them for the teaching situations.

Recommendations

On the basis of the conclusions, the following recommendations are made:

1. The five piano skills listed as most frequently demonstrated in teaching, as listed by the respondents, should be stressed more in college piano study for the music education major preparing to teach in the public schools.

2. Music education majors should consider the piano as an instrument to enhance the music education programs in the public schools.

3. A more practical selection of piano literature should be introduced to students preparing to be music educators.

4. Further research should be conducted to develop a list of specific piano skills which the music education major should acquire to be better equipped with the skills most frequently demonstrated in teaching.

5. Further research should be conducted to determine course objectives and competencies in piano performance as needed by the music education major in the teaching of music in the public schools and course objectives and competencies developed that will lead to a statement of priorities for piano study.

6. Further research should be conducted to determine if class piano instruction can be an effective teaching technique.

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APPENDIXES

APPENDIX A

Survey of Piano Skills of Certified Music Teachers in North Carolina

SURVEY OF PIANO SKILLS OF CERTIFIED MUSIC TEACHERS IN NORTH CAROLINA

Name: _____

School Address: _____

_____ School Telephone No.: _____

Home Address: _____

_____ Home Telephone No.: _____

1. Number of years of teaching experience: _____

2. List college degrees held: _____ _____ _____

3. Present teaching assignment in music: _____

4. Present level of certification: _____

5. Areas of music in which you have been trained to teach, such as K-6 and band: _____

_____

_____

6. Areas of music that you have taught: _____

_____

_____

7. Principal instrument: _____

8. Number of years you have received training in piano prior to college:

_____a. Private training
_____b. Class training
_____c. No training

9. Number of semesters/quarters you have received training in piano in college:

SEMESTERS

_____a. Private training
_____b. Class training
_____c. No training

QUARTERS

_____a. Private training
_____b. Class training
_____c. No training

10. If you were not required to study piano in college, was your exemption due to:

_____a. Adequate skills at the piano
_____b. Substitution of another instrument
_____c. Other (Specify) _____

11. If your answer above were 10b, name the instrument: _____

12. What percent of your time do you play the piano in your teaching assignment:

_____a. 81% or more
_____b. 61-80%
_____c. 41-60%
_____d. 21-40%
_____e. 1-20%
_____f. 0%

13. If your answer above were 12f, was this due to:

_____a. Using another instrument
_____b. Having a regular pianist
_____c. Using no instrument
_____d. Feeling inadequate at the piano
_____e. Other (Specify) _____

14. What percent of your classroom time is a piano available for your use in teaching?

_____a. 100%
_____b. 75-99%
_____c. 50-74%
_____d. 25-49%
_____e. 1-24%
_____f. 0%

15. What is the condition of the piano that you use for instructional purposes?

_____a. Excellent
_____b. Above average
_____c. Average
_____d. Below average
_____e. Poor

16. Rank the following piano skills in order of their emphasis in your piano training by writing the number 1 to 19 in the appropriate blanks. Number 1 represents the skill most emphasized in piano training, and Number 19 represents the least emphasized skill.

_____a. Accompanying
_____b. Chord progressions
_____c. Chords
_____d. Compositions
_____e. Dynamics
_____f. Ensemble playing
_____g. Fingering
_____h. Harmonization of a melody
_____i. Improvisation
_____j. Note accuracy
_____k. Open score reading
_____l. Pedaling
_____m. Phrasing
_____n. Rhythms
_____o. Scales
_____p. Score reduction
_____q. Sight reading
_____r. Technique
_____s. Transposition

17. Rank the following piano skills in order of their emphasis in your teaching by writing the number 1 to 19 in the appropriate blanks. Number 1 represents the skill most emphasized in your teaching, and Number 19 represents the least emphasized skill.

_____a. Accompanying
_____b. Chord progressions
_____c. Chords
_____d. Compositions
_____e. Dynamics
_____f. Ensemble playing
_____g. Fingering
_____h. Harmonization of a melody
_____i. Improvisation
_____j. Note accuracy
_____k. Open score reading
_____l. Pedaling
_____m. Phrasing
_____n. Rhythms
_____o. Scales
_____p. Score reduction
_____q. Sight reading
_____r. Technique
_____s. Transposition

18. Check any of the following selections that you have played. You may not have played any selection from this list. Check any of the following selections that compare in difficulty to other pieces you have played.

_____a. Bach: Book II
_____b. Bach: Short Preludes or Inventions
_____c. Bartok: Mikrokosmos, Book I
_____d. Chopin: Easier Preludes
_____e. Clementi: Sonatinas Opus 36
_____f. Grieg: Lyrical Pieces
_____g. Kabalevsky: Opus 27
_____h. Mozart: Viennese Sonatinas
_____i. Schumann: Opus 68

19. Do you perform piano selections from the literature that you studied in college in your present teaching assignment?

_____Yes No _____

20. What percent of your classroom time do you use your college piano literature?

_____a. 81% or more
_____b. 61-80%
_____c. 41-60%
_____d. 21-40%
_____e. 1-20%
_____f. 0%

21. Do you find it necessary to practice your college literature in order to prepare for your day-to-day teaching?

_____Yes No _____

22. Do you use the piano in studying music scores?

_____a. 81% or more
_____b. 61-80%
_____c. 41-60%
_____d. 21-40%
_____e. 1-20%
_____f. 0%

23. Is an accompanist available for your teaching that possesses piano skills comparable to yours? _____Yes No _____

Please complete and return this form in the enclosed pre-addressed envelope to: Mr. Trelles G. Case
621 South Mendenhall Street
Greensboro, NC 27403

APPENDIX B

Rating Sheet

Rating Sheet

Course observed _____

Type of compositions played or skills demonstrated _____

_____

Actual time piano used (in minutes) _____

Additional skills employed (observed) _____

_____

Rating Scale: 1 (Superior); 2 (Excellent); 3 (Good); 4 (Fair); 5 (Poor)

Performance at the Piano	1	2	3	4	5	Remarks
1. Accuracy						
a. Notes						
b. Rests						
2. Rhythm						
a. Note values						
b. Continuity						
c. Accents						
3. Phrasing						
a. Legato						
b. Staccato						
4. Dynamics						
a. Melodic contrast						
b. Accompaniment balance						
5. Pedal						
6. Improvisation						
7. Chord progressions						
8. Accompanying						

APPENDIX C

Letter to Prospective Participants

THE UNIVERSITY OF NORTH CAROLINA
AT GREENSBORO

School of Music

May 14, 1976

Dear Music Teacher and Colleague:

As part of a doctoral study in music education involving music teacher training programs being conducted at The University of North Carolina at Greensboro under the direction of Dr. Walter L. Wehner, you have been selected to participate in this statewide study. The study includes a carefully selected sample of music teachers certified to teach music in grades K-12.

Your cooperation in completing the enclosed inquiry form will enable me to obtain greater insight into the overall scope of music education programs with special emphasis on piano training. Please be as accurate and objective as possible and be assured that your responses will be kept confidential. Your name will not be associated with any of the questions.

The success of the study, therefore, depends upon the wholehearted cooperation of you and other music teachers in the state. Your immediate response and assistance will be appreciated. A stamped, pre-addressed envelope is enclosed for your convenience in mailing your form to me by May 31.

A summary of the inquiry responses will be available to each person who completes and returns the form. I'd like you to be one of them.

Sincerely yours,

Trelles G. Case
Doctoral Student

Walter L. Wehner, Director
Graduate Studies in Music

pg

Enclosures

APPENDIX D

Kinds of Piano Training in College by Semesters/Quarters for Teaching Categories

TABLE 27

KINDS OF PIANO TRAINING IN COLLEGE BY SEMESTERS/QUARTERS FOR BAND CATEGORY

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	-	-	-	-
1 - 3	7	5	-	7	5	-
4 - 6	13	1	-	4	5	-
7 - 9	2	-	-	3	2	-
10 - 12	1	-	-	-	1	-
13 - 15	-	-	-	-	-	-
16 - 18	-	-	-	-	-	-
Total	23	6	-	14	13	-

TABLE 28

KINDS OF PIANO TRAINING IN COLLEGE BY SEMESTERS/QUARTERS FOR CHORAL CATEGORY

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	2	-	-	1
1 - 3	4	2	-	2	2	-
4 - 6	11	-	-	6	-	-
7 - 9	7	-	-	4	-	-
10 - 12	1	-	-	1	-	-
13 - 15	-	-	-	-	-	-
16 - 18	-	-	-	-	-	-
Total	23	2	2	13	2	1

TABLE 29

KINDS OF PIANO TRAINING IN COLLEGE BY SEMESTERS/QUARTERS FOR ELEMENTARY CATEGORY

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	5	-	-	-
1 - 3	6	5	-	1	1	-
4 - 6	11	2	-	3	-	-
7 - 9	26	-	-	4	1	-
10 - 12	6	-	-	10	-	-
13 - 15	-	-	-	-	-	-
16 - 18	-	-	-	-	-	-
Total	49	7	5	18	2	-

TABLE 30

KINDS OF PIANO TRAINING IN COLLEGE BY SEMESTERS/QUARTERS FOR GENERAL CATEGORY

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	4	-	-	-
1 - 3	5	3	-	-	1	-
4 - 6	2	2	-	5	1	-
7 - 9	8	1	-	3	-	-
10 - 12	1	-	-	-	-	-
13 - 15	-	-	-	-	-	-
16 - 18	1	-	-	-	-	-
Total	17	6	4	8	2	-

TABLE 31

KINDS OF PIANO TRAINING IN COLLEGE BY SEMESTERS/QUARTERS FOR ORCHESTRA CATEGORY

Semesters or Quarters	Semester Piano Training			Quarter Piano Training		
	Private	Class	None	Private	Class	None
None	-	-	3	-	-	-
1 - 3	4	4	-	-	1	-
4 - 6	1	-	-	1	-	-
7 - 9	2	-	-	1	-	-
10 - 12	-	-	-	-	-	-
13 - 15	-	-	-	-	-	-
16 - 18	-	-	-	-	-	-
Total	7	4	3	2	1	-

APPENDIX E

Sample List of Compositions

Sample List of Compositions

Akers, Little Classic Suite
"Overture"
"Arioso"
"Minuetto"

Albert, "Feelings"

Allen, "Home for the Holidays"

Anderson, "Sleigh Ride"

Bach, "Awake, Awake"

Bach, "Beside Thy Cradle here I Stand"

Bach, "March"

Bach, "Minuet"

Bach, "Now let every Tongue Adore Thee"

Bach, "Prelude" (from Cantata No. 156)

Bach, "Sleepers, Wake"

Backer, "I'd Like to Teach the World to Sing"

Barber, "Under the Willow Tree"

Bart, "Consider Yourself" (from Oliver)

Beethoven, "Joyful, Joyful, Joyful, We Adore Thee"

Berlin, "White Christmas"

Besig, "It's a Wonderful Thing to be Me"

Bock, Fiddler on the Roof

Bullard, "Winter Song"

Buxtehude, "Rejoice, Beloved Christians"

Cahn, "Let It Snow"

Carpenter, "Merry Xmas Darling"

Carter, Overture in Classical Style

Christiansen, "Beautiful Saviour"

Coates, "Both Sides Now"

Cockshott, A Faun in the Forest (Scenes)

Cohan, "You're a Grand Old Flag"

Copland, "The Promise of Living"

Costantini, "Now With One Accord"

DeCormier (arr.), "Obey the Spirit of The Lord"

Dowland, "Gentle Love"

Ehret (ed.), "O Mary, Where is Your Baby?"

Erickson (arr.), Suite of Early Marches
"Fife and Drum Tacet"
"Slow March"
"Halle March"
"March from "La Bataille"

Erickson, "Toccata for Band"

Farnon, "Allsports March"

Gass, "Ringgold Rhapsody"

Gauntlett, "Once in David's Royal City"

Giovannini, "Overture in B Flat"

Gould, "Revolutionary Prelude

Gruber, "Silent Night Holy Night

Grundman, "An Irish Rhapsody"

Hairston (arr.), "Live a Humble"

Handel, "Oh Lord, In Thee Have I Trusted"(from The Dettingen Te Deum)

Handel, "Thanks Be To Thee"

Handel, "While Shepherds Watched Their Flocks"

Hannisian, "Movin' On"

Hanson, "O How Shall I Receive Thee"

Haydn, The Imperial Mass
"Kyrie Eleison"

Herbert, "Toyland"

Holst, "In the Bleak Mid-winter"

Howard (arr.), "Medley Christmas"

Huff, "The Matinee"

Humperdinck, Hansel and Gretel (Scenes)

Isaac, "Tango Trocadero"

Johnson (arr.), A Mozart Festival

Landis, "Boardman"

Leitch, "Sunny Day"

Leontovich, "Carol of the Bells"

Luther, "A Mighty Fortress"

Lutkin, "The Lord Bless You and Keep You"

Marks, "Rudolph's Christmas Medley"

McBeth, "Chant and Jubilo"

McLin, Christmas Carol Suite
"Deck the Hall"
"O Little Town of Bethlehem"
"We Wish You a Merry Christmas"

Mendelssohn, "Come, O Lord, Hear Thou My Pleading"

Mitchell, "Introduction and Fantasia"

Moore, "Twas the Night Before Christmas"

Morley, "April is in My Mistress Face"

Mozart, The Marriage of Figaro (Scenes)

Nelhybel, "Festivo"

Nelson, "Hosanna"

Ortone (arr.), "Christmas Medley"

Osterling, "Charter Oak"

Pfautsch, "Sing Praises"

Piccini, "The Good Daughter"

Praetorius, "Lo, How a Rose E'er Blooming"

Praetorius, "While Shepherds Watched Their Flocks"

Quilter, "Non Nobis, Domine"

Raposo, "Sing"

Reed, "Imperatrix"

Regney and Shayne, "Do You Hear What I Hear"

Ringwald, "Turn Back, O Man"

Roberts, "Clap Your Hands"

Roesch, "God is True"

Schmidt, "Try to Remember" (from the Fantasticks)

Schroeder (arr.), "German Carol"

Schubert, "The Omnipotence"

Sedaka and Greenfield, "Love Will Keep Us Together"

Seiber, Three Hungarian Folk Songs
"Apple, Apple"
"The Handsome Butcher"
"The Old Woman"

Shaw, "Fanfare for Christmas Day"

Simeone, "Christmas Carol"

Simeone (arr.), "Go Tell It on the Mountain"

Simeone, "The Little Drummer Boy"

Sleeth, "Fa-la-la Fantasie"

Sleeth, "Hallelujah, Glory Hallelujah"

Sleeth, "Jazz Gloria"

Spears, "Meditation and Festiva"

Stone, "Simple Gifts"

Styne, "Let it Snow! Let it Snow! Let it Snow!"

Thompson, "Alleluia"

Thompson, Frostiana

Valinoff, "Lord, Thou Art Mighty"

Webb, "MacArthur Park"

Wells and Torme, "The Christmas Song"

Willan, "Hodie, Christus Natus est"

Williams, "For All the Saints"

Work (arr.), "Go Tell It on the Mountain"

Zimmerman, "Anchors Aweigh"

Books

Applebaum, String Builder

Ehret, Barr, Blair, Music for Everyone

Fussell, Ensemble Drill

MacMillan Schirmer Program, The Spectrum of Music

Red, Choral Sounds

Schirmer, Five Centuries of Choral Music

Smith, Treasury of Scales

Weber, First Division Band Method

Yaus, Rhythmical Studies

Tunes

"A Holly Joy Christmas"

"America the Beautiful"

"Au Clair de la lune"

"Auld Lang Syne"

"Camels and Kings"

"Come Ye Thankful Come"

"Count Your Blessings Instead of Sheep"

"Deck the Halls"

"God of Our Fathers"

"God Rest Ye Merry Gentlemen"

"Good King Wenscelas"

"Holiday in Paris"

"Hot Cross Buns"

"Jingle Bells"

"Mary Had a Little Lamb"

"Merrily We Roll Along"

"Miasama"

"Pat-a-pan"

"Peace Must be our Goal"

"Rock, Rock, Merrily on High"

"Rockin Around the Christmas Tree"

"Rudolph the Red-Nosed Reindeer"

"Russian Sailors Dance"

"Solo Flight"

"Twinkle, Twinkle Little Star"