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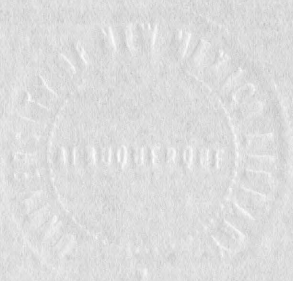

A Thesis

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In Partial Fulfillment

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Master of Arts in Education

by

Jose Alvarado Salazar

August 1952

This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Committee of the University of New Mexico in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

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DEAN

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DATE

AN EVALUATION OF MUSIC FACILITIES,
EQUIPMENT, AND COURSE OFFERINGS
IN A GROUP OF NEW MEXICO PUBLIC HIGH SCHOOLS

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CHAPTER I

INTRODUCTION TO THE STUDY

I. THE PROBLEM

The transition of music in America from a personal, specialized accomplishment to a social and industrial enterprise[1] implies serious study and immediate action by those responsible for the education of youth. The present-day educator must be alert to the numerous functions of music in American society, both vocational and avocational, if his objective be to offer youth full educational opportunities for coping with contemporary life.

Music education in the public schools of New Mexico is not an innovation. In several schools throughout the state music programs have reached highly commendable stages of development. In a large number of the schools some music instruction is provided. However, in others, opportunities for musical development are not yet afforded to youth. The number of factors determining these inconsistencies in music programs is great. The examination of only one or a few of these factors as a basis for judgment of any music

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[1] Lilla Belle Pitts, The Music Curriculum in a Changing World (New York: Silver Burdett Company, 1944), p. 8.

program would be unjust and inaccurate. However, this writer believes that careful consideration of several of these factors will furnish a valuable insight into the conditions as they exist, and will suggest improvements that might result therefrom.

Statement of the problem. This research will survey the status of facilities, equipment, and course offerings now available for the teaching of music in New Mexico high schools with enrollments up to one thousand. The survey includes six phases: (1) presentation and analysis of ideal standards for music instruction as proposed in professional literature; (2) presentation and analysis of minimum essential standards for music instruction as proposed by a panel of experts in the field of music education; (3) presentation and analysis of general recommendations and standards proposed by the Music Educators National Conference and restated by the New Mexico Department of Education; (4) presentation and analysis of statistics revealing status of high-school music instruction in the state with respect to facilities, equipment, and course offerings; (5) comparison of this status with the various standards and recommendations based upon the results of the comparison; and (6) presentation of conclusions and recommendations based upon the results of the comparison.

II. DEFINITION OF TERMS USED

Music facilities apply to all rooms used for the teaching or performance of music such as the auditorium, music classrooms, director's office, music library, and instrument storage space.

Music equipment includes music instructors, articles of furniture in music rooms, vestments, and instruments for the reproduction or performance of music.

Course offerings refer to the organized units of music instruction offered to students for credit as parts of the music curriculum.

III. NEED AND PURPOSE OF THE STUDY

The study was suggested by personal observation of several high-school music departments. It was re-emphasized when seventy-five per cent of thirty high schools in New Mexico indicated in a survey that their facilities and equipment for music teaching were inadequate.[2] Further evidence of the need for the study is apparent in the following statement of the American Council on Education:

> The need for a factual investigation to determine minimum requirements for school furniture and equipment has been recognized for many years. . . because the

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[2] Results of a questionnaire prepared by a committee of secondary education students from the College of Education of The University of New Mexico in April of 1952.

> expenditure for school furniture and equipment in the United States averages nearly fifty million dollars a year and because there is a lack of standards determined on the basis of school need. . .[3]

There has been no previous investigation appraising the status of music facilities, equipment, and course offerings in the high schools of New Mexico. A similar need is recognized in literature criticizing these deficiencies in the nation's schools.

A great number of New Mexico's high schools have been subjected to sudden and tremendous increases in enrollment within the past twelve years, far beyond the normal capacity of their plants. Practically all phases of the curriculum, including music instruction, have suffered great handicaps because of this. The extensive building and remodeling projects now being undertaken to alleviate these overcrowded conditions should be carried on with an awareness of all such physical requisites of an adequate music department as can be revealed in a study of this type.

The purpose of this study is to evaluate, by carefully chosen standards, these conditions as they exist in a group of the New Mexico public high schools to make possible recommendations for improvement of the conditions on the

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[3] American Council on Education Series, "Specifications for Folding Chairs," School Plant Research, 7:iii, February, 1942.

basis of this evaluation. It proceeds on the assumption that generally, adequate conditions and materials facilitate and encourage effective learning and effective instruction. Music educators have been known to achieve amazing successes under difficult and limited circumstances, but it must be realized that such circumstances are exceedingly trying for both students and instructors and it is highly improbable that success is the common occurrence when they exist. It is hoped that this work will stimulate more comprehensive examination of this problem, and finally, that the standards and recommendations herein will aid planning, developing, and maintaining effective high-school music programs.

IV. THE SCOPE AND THE LIMITATIONS OF THE STUDY

This investigation is limited to a quantitative analysis of facilities, equipment, and course offerings as they now exist in the music programs of New Mexico public high schools with enrollments up to one thousand. No attempt is made here to ascertain such degrees of quality as would be inherent in acoustical excellence of spaces, quality of materials, and methods of construction of either facilities or equipment. Neither are such aspects of music education as quality of teacher preparation or method and content of courses of study dealt with here.

V. SOURCES OF THE DATA

The sources of the data are: (1) responses to items of a questionnaire[4] completed by sixty per cent of the public high schools in the state of New Mexico; (2) responses to a questionnaire devised by a committee of secondary-education students from the College of Education of The University of New Mexico in April of 1952, concerning some phases of music education in the high schools of New Mexico;[5] (3) a questionnaire completed by a panel of ten outstanding personalities in the field of music education;[6] (4) standards and recommendations contained in Bulletin Seventeen of the Music Educators National Conference, and restated by the State Department of Education of New Mexico.[7]

VI. PROCEDURE OF THE INVESTIGATION

Prior to formulating the two questionnaires used as the means of gathering the data, there was careful

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[4] Appendix, p. 110.

[5] Results of a questionnaire prepared by a committee of secondary education students from the College of Education of The University of New Mexico in April of 1952.

[6] Appendix, p. 115.

[7] Roberta H. Zohn and E. Almeda Rogers, A Guide in Music Education for the Schools in New Mexico, Junior and Senior High School (Portales, New Mexico: Portales Printing and Lithographing, 1950), pp. 17-18, 84-86.

examination of a wealth of literature on music education and on other related phases of education. It was the aim of the writer, during the process of compiling the questionnaires, to include those items of equipment and facilities which were most frequently discussed in the literature as essential or desirable to effective music instruction. Regarding the list of musical instruments that appears as the last part of both questionnaires it seemed most feasible to list all instruments which could conceivably be used in a high-school music program. Again in the list of course offerings which is included in both of the questionnaires, related literature was of great assistance in making this a representative list of courses found in all sizes and grades of high schools. In each section of the questionnaires space was allotted for the insertion of any item that might have been omitted. The first drafts of the two questionnaires were submitted for approval to members of the faculty of the music and psychology departments, and of the College of Education of The University of New Mexico. Following the recommendations of these faculty members further investigation was necessary. As a result of this investigation the questionnaires underwent numerous changes. The second draft was submitted and approved.

For the sake of clarity, the questionnaires will be identified as: Questionnaire A applying to the questionnaire

prepared for the high schools; and Questionnaire B, applying to the one prepared for the members of the panel of experts.

Since the two main steps in the development of this study were gathering and evaluating the data every attempt was made to maintain a close correlation between Questionnaire A which sought an inventory of existing facilities, equipment, and course offerings in New Mexico high schools, and Questionnaire B, which sought to establish minimum essential standards of these items as proposed by a panel of experts.

The high schools are divided into four classifications according to enrollment. The classifications are: 0-100 enrollment, 100-200 enrollment, 200-500 enrollment, and 500 and above. The standards of the panel of experts abide by these classifications. These classifications were decided upon because it was believed that the significant differences in conditions among high schools are best described by them.

Questionnaire A was mailed to 112 public high schools in the state. Sixty-seven or approximately sixty per cent of these schools completed the questionnaire. Familiarity with conditions in many of the sections of the state from which no responses have come suggests that probably responses from these schools might have had some bearing upon the statistics of this investigation. The lack of responses could also

indicate the absence of adequate inventory systems, if not inadequate music departments, since this questionnaire relied wholly on information which should be contained in the records and files of an efficiently operated principal's office.

Sixty per cent of the contacted schools responded. They were located in every section of the state and represented each of the size categories established. Consequently, the responses seemed to constitute a valid sample.

Questionnaire B sought for the opinions of experienced and successful individuals in the field of music education. In the light of their experience and knowledge of the field they were to set up minimum essential standards of adequacy, for each item mentioned or listed in Questionnaire A.

In the organization of a competent panel of experts the writer endeavored to select representatives from six areas of music education that seemed to have direct bearing on the problem. These areas are: (1) the supplying of music equipment; (2) music education in the southwestern section of the United States; (3) orchestral instruction; (4) band instruction; (5) choral instruction; (6) music teacher preparation.

In order to qualify for the panel, each member had to

fulfill any four of the eight following specifications.

(1) Broad experience in the field of high-school music; such as instruction, supervision, clinical consultation.
(2) Present engagement in high-school music instruction.
(3) Direct contact with music education in the Southwest.
(4) Possession of a university or college degree.
(5) Status as university or college professor of music education.
(6) Prominence as indicated by listing in Who's Who in America, Directory of American Scholars, Leaders in Education, or Music Education Source Book.
(7) Contribution to music education through literature, composition, and arrangement.
(8) Direct activity in the supply of music equipment.

Questionnaire B was sent to 23 individuals meeting the above requirements. Eighteen of these responded. Five of the individuals that replied expressed great interest in the problem but felt unable to comply for various reasons. Three of the individuals who answered the covering letter expressed their unwillingness to reply. Ten of the individuals who replied cooperated graciously in the completion of the questionnaire in spite of its difficulties.

The process of evaluation consisted of judging the responses to items in Questionnaire A in terms of standards proposed in Questionnaire B. Question II of Questionnaire A was more specifically evaluated according to standards of the Music Educators National Conference and as these standards are restated by the New Mexico Department of Education.

VII. ORGANIZATION OF THE THESIS

Chapter I introduced the problem, sought to justify its value, and described procedures and techniques employed in the development of the study.

Chapter II surveys and discusses standards and recommendations as contained in literature on music education.

Chapter III deals specifically with the data gathered by the use of the two questionnaires. The existing conditions of music facilities, equipment and course offerings in the group of New Mexico high schools with enrollments up to one thousand are evaluated, first, according to the essential minimum standards as provided by the panel of ten outstanding personalities in music education, and secondly, wherever possible, by the standards and recommendations as they are stated in Bulletin Seventeen of the Music Educators National Conference, joined with those of the New Mexico Department of Education.

Chapter IV states conclusions and offers suggestions to ameliorate the problem.

CHAPTER II

REVIEW OF THE LITERATURE

I. INTRODUCTION

There are no formally established criteria by which to judge the total efficacy of music programs, but there is some general agreement among specialists in music education about what is both necessary and desirable in number and type of facilities, equipment and course offerings. A bulletin issued in 1932[8] and reissued in 1949 by the Music Educators Research Council of the Music Educators National Conference is responsible for much of this agreement. This bulletin presents a large number of standards, recommendations, and suggestions for building and equipping the most functional high-school music department. The wide acceptance of the contents of this bulletin by music educators is evident in the numerous references made to it in much of the literature. More specific treatment of this bulletin will be found in Chapter III.

Every thoughtful critic of music education seems to be aware of the importance of adequacy in music facilities and equipment to the success of a music program. A guide in

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[8] Music Educators Research Council, Music Rooms and Equipment, Bulletin No. 17, 1932.

music education for the high school, which is a bulletin from the New Mexico State Department of Education, makes these two significant statements:

> In building a successful vocal program even the finest musician and the most capable teacher must devote plenty of hard thinking to the details of the physical plant and equipment. . .[9] Plant facilities, materials, finance, and adequate school policies are of the utmost importance in the music program.[10]

H. R. Wilson in his book Music in the High Schools also expresses a clear awareness of this fact when he says:

> Many good music teachers have been forced to do a mediocre job through lack of adequate rooms, equipment, and materials for carrying on their work. . . Superior teaching is dependent on adequate rooms, equipment, and materials.[11]

These and many similar opinions give rise to the questions: Can there be a certain agreed criteria by which it would be possible and valuable to determine whether or not a public high school has the minimum essential facilities and equipment needed to provide youth with music opportunities which are the common need today? It is in order to supply an answer to this question that this chapter reviews proposed standards in the literature on music education. Such an

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[9] Roberta H. Zohn and E. Almeda Rogers, op. cit., p. 8.

[10] Ibid., p. 81.

[11] Harry Robert Wilson, Music in the High School (New York: Silver Burdett Company, 1941), p. 313, p. 335.

answer is vital to the remainder of the study.

II. MUSIC ROOMS AND PROPER FURNISHINGS

General classroom and storage requirements for music instruction. One of the most basic approaches to the question that has been stated can be made through appraisal of criteria for music rooms and their furnishings. A list of general requirements for adequate music rooms, as they appear in Bulletin No. 17 of the Music Educators National Conference includes:

> 1) The function of the music class is to produce music, which is usually of such a loudness that it disturbs classes in adjacent rooms unless prevented by proper acoustic construction or by locating the music classrooms in such a place that no sounds from the music rooms may reach other classrooms.
>
> 2) Members of music organizations are required to see two and sometimes three things simultaneously for entire class periods--music notation, words, and the conducting of the director. No other class demands this type of concentration. To facilitate this, such groups should be seated on terraced floor sections facing the director's stand or podium.
>
> 3) Members of school bands and orchestras provide many of their own instruments, often quite expensive, which are carried to and from school each day and which must be stored in safe quarters while the students attend other classes. Regulation school lockers are too small to contain any but the smallest of musical instruments. Carrying delicately constructed large musical instruments through the crowded halls of a school building during the rush of changing classes is dangerous to both instruments and students. Therefore, adequate safe storage should be provided, within the rehearsal room(s) or in quarters adjacent to or near the rehearsal rooms of the band or orchestra. Special lockers are available for this purpose.

Schools in which the same school-owned musical instruments are used by several students should have instrument lockers placed where they may be supervised by a member of the music faculty, preferably in the music room where they are used.

4) School musical organizations are frequently called upon to perform at school assemblies, concerts, or other gatherings held in the school auditorium. The music room(s) should be so located that such groups may assemble in the music room(s) for tuning and receiving final instruction before moving onto the stage. Band and orchestra instruments should be stored in close proximity to the auditorium stage so players may take out and replace their instruments without risking damage by carrying instruments through crowded halls. Therefore, the ideal provision would require the music room (or rooms) to be near the auditorium stage, with instrument storage room between.

5) Performance in a chorus, orchestra, or band requires some degree of physical exertion; therefore the music rooms should be well ventilated. However, care should be taken in planning the rooms so that air ducts to the music rooms are not connected with air ducts leading to other classrooms, and that the windows of the music room do not open on a court upon which other classroom windows open.

6) Inasmuch as music students must use their eyes at all times during rehearsals, the lighting should be arranged so that eye-strain is avoided. To this end, glare should be prevented by such rules as not allowing windows to be directly behind the point where the director stands. Surfaces to be viewed should be uniformly illuminated.

7) The volume of sound produced by the combined voices of a chorus class, or the combined instruments of an orchestra or band, requires a larger room than one used by a class in which one person is heard at a time. A large musical organization performing in a small room produces an aural sensation similar to that of a person screaming in a rain barrel. A space allotment of 260 cubic feet per member is recommended for music classrooms, with floor space of at least eighteen square feet per person for chorus members in addition to adequate space for aisles, piano, conductor's platform and other furniture.

8) From an acoustical point of view, the music room is a musical instrument of major importance. It can deal with the music produced in it with high fidelity or it can seriously impair intelligibility and the quality, quantity, balance, and blend of tone, depending upon its size, shape, material, and construction. Careful acoustical planning must, therefore, be exercised in order to provide such things as optimum reverberation time, even distribution of sound, and freedom from undesirable absorption at certain pitches. In situations where difficult problems in acoustical planning exist, a competent sound engineer should be consulted.

9) The music library is as important to the music department as is the literary library to the school as a whole. The proper care of sheet music, which must be issued in large quantities to music students, requires special equipment and efficient handling to prevent heavy losses.

Sheet music is most satisfactorily stored in steel filing cabinets of the four-drawer type, while music books are stored on shelves as are other books. The distribution and collection of sheet music is usually accomplished by means of folios in which the music is inserted and from which it is later removed by the music librarian as directed by the instructor. A well equipped and conveniently located music library, which is large enough to serve as a workshop as well, is an essential unit if the music department is to function efficiently.[12]

This section of the bulletin is the most frequently referred to in the literature reviewed here. Often authors of books in music education merely elaborate or make slight additions to this list of requirements.

Performance spaces for music instruction. The ultimate goal in the instruction of instrumental or choral music is performance. This demands a school auditorium

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[12] Music Educators Research Council, op. cit., 1949, pp. 9-10.

suitably constructed for performance of and listening to music. This demand does not imply the need for an auditorium exclusively for music activities, but it does suggest that the performance of music should be carefully regarded in the construction of high-school auditoriums. Such consideration will benefit not only the music program of the school but also such activities as lectures, forums and dramatic presentations. Dykema and Gehrkens recommend that the auditorium arrangements should be such that the needs of any performing group can be met without undue strain on performers, listeners, and janitorial staff.[13]

Bulletin No. 17 of the Conference suggests for stage arrangement and equipment of the auditorium:

> 1) The stage must be large enough to seat comfortably the largest number expected in band, orchestra, or chorus, allowing eighteen square feet of floor space per instrumental performer or fifteen square feet per vocal performer. . .
>
> 2) . . . The width of the proscenium in a modern school should not be less than forty-eight feet to accommodate music groups, operetta, and dramatic performances. With a proscenium width of this dimension the proscenium height should be approximately thirty feet.
>
> 3) If possible, movable risers, built in small sections, should be provided and convenient storage space provided for them. . .

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[13] Peter W. Dykema and Karl W. Gehrkens, The Teaching and Administration of High School Music (Boston, Massachusetts: C. C. Birchard and Company, 1951), p. 417.

4) Lighting should be provided for the back of the stage, since the members of musical organizations must face the audience while reading music and watching the director.[14]

It must be noted that most of these suggestions are applicable only to schools having funds enough to adopt them, hence for all practical purposes they are ideal standards. Nevertheless it seems quite probable that any poor auditorium stage could be improved by following the most practical of these suggestions.

A very common practice in high schools is use of the auditorium for all types of music classes. Critics of music education feel that this practice is unfortunate and usually detrimental to effective instruction. In short, the function of the auditorium should be to serve the needs of largest assemblies as often as possible, and its use as a music classroom should be avoided whenever possible.[15]

Vestments, uniforms, and costumes in music instruction. No serious choral performance should be attempted without the proper staging, and vital to proper staging are adequate risers.[16] A set of risers adds much to the enjoyment and

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[14] Music Educators Research Council, op. cit., p. 19.

[15] Peter W. Dykema and Karl W. Gehrkens, op. cit., p. 417.

[16] Arthur E. Ward, Music Education for High Schools (Dallas, Texas: American Book Company, 1941), p. 236.

value of a concert for not only does it make the chorus look better, but it places the performers in correct relationship to the conductor. He sees each face, and all eyes see him: essentials in good choral performance. The audience can both see and hear the singers to better advantage.

Vitally important in the public appearance of any musical group is uniformity of costume. The proper costume will in many cases be suggested by the occasion, but the common choir robe and band uniform are definitely a necessary part of the equipment for every high school musical performance, ". . . because visual unity seems to imply tonal unity."[17] Arthur Ward suggests that the appreciation of the music by the audience is sure to follow if the eyes are immediately satisfied.[18]

Stage risers for group choral performances. In the previous suggestions quoted from Bulletin 17 of the Music Educators National Conference, there was one calling for the presence of risers for stage performances. Practically any school could supply its choral groups with a set of risers at moderate cost. There are many types on the market that have proved satisfactory, but schools with limited budgets may appeal to their industrial arts departments or carpentry

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[17] Harry Robert Wilson, op. cit., p. 328.

[18] Ibid., p. 235.

shops for the construction of a suitable set.

Special purpose classrooms. Like every other phase of the music program, the number and type of music rooms comprising the music department of a high school is dependent on economic conditions of the community, the acceptance of music by the community, and the like. Many schools are able to provide specially constructed rooms for music instruction; others are compelled to utilize the combined gymnasium-music room, or the combined auditorium stage-music room, or the combined gymnasium-auditorium stage-music room. It is the prevailing opinion in music literature that such practices are detrimental to music instruction and to music learning, and should be used only when no other means are available.[19] Bulletin 17 lists a group of twelve special rooms for the teaching of music. Along with this list are recommended conditions for situations where combination rooms are used, but it is usually difficult to carry on any large-scale remodeling programs as would probably be entailed by following these suggestions.

Regarding the twelve special music rooms discussed in Bulletin 17, one would not expect to find all twelve of these rooms included in the school plant of any high school. There

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[19] Music Educators Research Council, op. cit., p. 20.

are large numbers of high schools throughout the United States that have been able to adopt combinations of two or more of these rooms with great success. A brief description of each of the twelve music rooms follows:

> 1. . . The ideal chorus room should be double the size of the average class room and wider from side to side than it is deep from front to back. The windows should be from the front to back. There should be fifteen square feet of space per person, and the floor should be stepped up with semi-circular risers, six to eight inches and thirty to thirty six inches in width; each riser should be made to accommodate one row of tablet arm chairs, preferably with drop desk arms, all facing the director's stand at the front center of the room. Space should be allowed in front of the risers for one grand or studio or upright piano, teacher's desk, director's music stand, radio-phonograph or recording machine, and music cabinet. The front wall should be equipped with blackboard, screen for film projector, with space for projector table. . .
>
> 2. . . The ideal orchestra room should be large enough to accommodate the largest orchestra ever expected by the school. Each player requires eighteen square feet of floor space for himself, his instrument, and his music stand, and 260 cubic feet of air space per person. The general plan should be similar to that of the ideal chorus room except that the floor risers should be at least forty-eight inches wide to accommodate instruments and music stands in addition to chairs and the students. The highest riser should be seventy-two inches or more wide in order to accommodate unusually large instruments, such as bass viols, tympani, large percussion instruments, and harps. There should be three or four elevations above the general floor level, and each elevation should be from six to eight inches high. But in no case should these risers be higher than eight or nine inches, since greater height may cause serious accidents. Furnishings should be similar to those of the chorus room, although chairs must be without arms and a piano is not always needed. . .
>
> 3. . . The ideal band room differs from the ideal

orchestra room only in that greater sound volume of the band requires more cubic feet of air space per person or greater absorption of sound through acoustical treatment, and that additional storage space is required for the larger instruments of the band and moth-proof storage space for the band uniforms. Lockers or cabinet space for band instruments are generally considerably larger and of different design than those for orchestral instruments. . .

4. . . The ideal theory and appreciation classroom should be approximately the same size as an ordinary classroom, accommodating thirty to forty pupils. At least the three or four rear rows of seats should be elevated on risers six or eight inches high, thirty inches in width, and each riser fitted with stationary theatre type chairs with drop desk arms. The space in front of the risers should be provided with loose drop desk arm chairs which may be placed as needed for written work or for performers. . .

. . . Space should be provided for piano, radio-phonograph, recording machine, teacher's desk and music cabinet, at the front of the room. The front wall should be equipped with blackboard (part of which should be lined with music staves), bulletin board space that is ample for much displaying of musical materials, film projector screen, and electrical outlets. The back wall should be equipped with space for film projector, with electrical outlets provided at convenient places. A closet should be provided for music stands, extra chairs, and music appreciation and theory materials. The room should be located near the other music rooms and especially near the instrument storage and music library rooms. . .

5. . . The ideal instrument class, ensemble and section rehearsal room should be of regulation classroom size, with loose chairs, preferably of the straight-back, bentwood variety. It should be acoustically treated and sound insulated from other classrooms and should be located near the other music rooms and especially near the instrument storage and music library rooms. Its equipment should be about the same as that suggested for the theory and music appreciation room. . .

6. . . Such a room as the all-purpose general music room should combine the essential features of the chorus room, the ideal orchestra room, and the ideal band room. . .

. . . The room should be large enough to care for the largest number of students expected in any class, allowing eighteen square feet of floor space and 260 cubic feet of air space for each student. Its shape should be wider (side to side) than it is long (front to back). . .

. . . Three or more risers at the back of the room, semicircular in shape, forty-eight inches in width and six to eight inches in height should be provided. If possible the back elevations should be wider, perhaps sixty inches or more. . .

. . . The furnishings are similar to the band and orchestra rooms. Music instrument storage room, band uniform storage, vestment storage, and music library rooms should be located adjacent to or near this all-purpose room. The most satisfactory compromise is to provide desk arm chairs for the back three or four rows (elevated seats) and straight-back bentwood chairs for the remainder of the room. . .

7. . . With the two-room unit, one room can be assigned to instrumental music and the other to vocal music, with cooperative usage of these facilities. . .

. . . The effective utilization of the two-room unit is not possible without two or more teachers of music. The furnishings are similar to the band and orchestra rooms. . .

8. . . These rooms should be so located and constructed that supervision may be easily maintained without interruption. The usual sizes are:

(1) For band or orchestra instruments, six feet by eight feet.

(2) For piano, with provision for one other instrument, eight feet by ten feet.

(3) For two pianos, or piano and phonograph (or radio), or for small ensemble such as string quartet, quintet, ten feet by twelve feet.

9. . . This room should be as close as possible to the other music rooms so as to realize complete utilization in a coordinated music program.

(1) There should be acoustical treatment of the walls and ceilings and insulation against sound transmission to and from other classrooms.

(2) There should be given careful consideration to sound conditioning of rooms for class piano if several pianos are used, due to the repercussive action of tone production of several performers.

(3) Furnishings should be similar to the Music Appreciation Room. . .

10. . . The Director's office need not be especially large, but should be quiet and accommodate a desk, two or three chairs, filing cabinets for correspondence, cabinets for miscellaneous storing, and any special equipment such as the Stroboconn, piano, phonograph, radio, recording machine, etc. . . .

11. . . The instrument storage room should be at least twenty feet wide and at least thirty feet long, with windows at one end or high windows along one side. Along both walls should be placed lockers of the number and size to care for the various musical instruments to be stored. . .

. . . The maximum depth of these lockers is forty-eight inches, and the maximum height is seventy-two inches. It is good practice to extend the lockers up to the ceiling for storage of equipment used only once or twice a year. Special ladders should be provided for reaching this high shelving or locker space. . .

. . . This room should be well ventilated and protected against excessive moisture or heat or extreme changes in temperature. The instrument storage room should open off the music room or the auditorium stage, or preferably both. . .

12. . . The music library room should be separate from the instrument storage room. However, it is usually desirable and practical to have the two rooms adjoining, both opening off the music room or stage or both. . .

. . . In size the library should be similar to the instrument storage room. The twenty-foot width is necessary to accommodate rows of four-drawer steel filing cases (both legal and letter size, with more of the former provided.) It is considered good practice to build closed cabinets above the filing cases up to the ceiling. Even though these high cabinets seem inaccessible, they may be used to advantage to store materials not used frequently. A ladder should be provided to reach the highest parts. . .

. . . Space must also be provided for music sorting racks, work tables, supply cabinets, chairs and desks. . .

. . . The music library room may also serve as the department office if necessary for economical reasons.[20]

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[20] Ibid., pp. 12-25.

The all-purpose classroom. Of these twelve rooms probably the one most often named as essential by both music educators and authorities on school plants is the all-purpose general music class room. Bodegraven and Wilson feel that the following five specifications are indispensible in such a room: (1) the acoustical properties of the room must be good. The conductor must be able to distinguish each section and individual at all dynamic levels. There must be no distortion of sound. (2) There must be adequate room for all participants and equipment. This implies that the space will allow satisfactory seating plans to be used. (3) There must be adequate facilities for storing instruments and music nearby. (4) It is highly desirable to have this room located so that other classes will not be disturbed. (5) Elevated risers are especially desirable.[21]

In behalf of the choral classes, Krone suggests the shape of the room should be fan-like, of the amphitheater type. It should have semi-circular side and rear walls.[22]

The well-designed high school music department, according to Normann, should provide a general music room, a rehearsal room, an instrument storage room, and individual

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[21] Paul Bodegraven and Harry Robert Wilson, The School Music Conductor (Chicago: Hall and McCreary Company, 1942), p. 62.

[22] Max T. Krone, The Chorus and Its Conductor (Chicago: Neil A. Kjos Music Co., 1947), p. 36.

practice rooms.[23]

In regard to some of the properties of the music rooms, Dykema and Gehrkens advise that there should be blackboards equipped with ruled music staves and that the supply of music stands in music departments should be determined by the largest band or orchestra classes.[24]

A simple but a valuable accessory for the high school music department is a tuning bar. Often in school orchestras the student oboest, who ordinarily supplies the pitch for the rest of the orchestra, is not proficient enough to perform this duty, in which case a tuning bar will serve the purpose better.[25]

The administrator of any high school, who seeks to include an adequate music program as part of the curriculum, should be prepared to advance and support plans for the construction and equipping of rooms properly adapted to music instruction.

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[23] National Research Council of Music Education, "High School Credit Courses in Music," (Chicago: Music Supervisors National Conference, Book of Proceedings, 1929), pp. 3-36. As found in Theodore F. Normann, Instrumental Music in the Public Schools (Philadelphia: Oliver Ditson Company, 1941), p. 86.

[24] Peter W. Dykema and Karl W. Gehrkens, op. cit., p. 143.

[25] Harry Robert Wilson, op. cit., p. 330.

III. INSTRUMENTS AND RECORDING OR REPRODUCING EQUIPMENT FOR MUSIC INSTRUCTION

The piano---the basic required instrument. Of all the musical instruments the piano is the most utilitarian. It is unquestionably indispensible for practically every type of music instruction or activity. The two types of pianos commonly recommended for school use are the upright and the grand. Wilson suggests that a grand piano is most suitable for choral and orchestral activities.[26] The New Mexico Guide suggests that the poorer school buy a good, expensive upright piano instead. The choice of type should depend partly on the size of music rooms. When a room is quite large a grand piano is preferable.[27]

School pianos should be mounted on roller frames or trucks since they are frequently moved about. They should be furnished with covers made from some durable material, so as to protect them from scratching and marring. Finally, every school piano should be tuned to A 440.[28]

The phonograph in music instruction. If a course in music appreciation or music history is offered in the

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[26] Ibid., p. 328.

[27] Peter W. Dykema and Karl W. Gehrkens, op. cit., p. 432.

[28] Harry Robert Wilson, loc. cit.

curriculum of a school a phonograph of good quality is of the utmost importance.[29] In schools with advanced music programs phonographs are highly desirable in chorus, orchestra, or band room as an aid in instruction.

Recording equipment. Recording equipment has proved a valuable instructional aid in music. The most recent books include such equipment as a desirable addition to the music equipment.[30]

Ensemble instruments. The instrumentation recognized as necessary for a satisfactory high school orchestra is patterned after the standard symphony orchestra. The following quotation expresses the prevailing attitude regarding school orchestras:

> ". . . It is essential, therefore, that there be an instrumentation that is sufficiently complete for the characteristic qualities of the various choirs to be realized. It is only upon this basis that an adequate performance of the literature of the symphony orchestra may be approximated."[31]

The following list of instruments was proposed by the Music Supervisors National Conference as minimum essential instrumentation for school orchestras: four first violins, four second violins, two violas, one cello, one bass, one

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[29] Ibid., p. 33.

[30] Music Educators Research Council, op. cit., p. 68.

[31] Theodore F. Normann, loc. cit.

flute, two clarinets, one oboe, one bassoon, two trumpets or cornets, one trombone, two tubas (one E flat and one double B flat), two French horns, one set of tympani, and percussion.[32]

Since this instrumentation calls for about twenty-four or twenty-five players and conductor, it seems reasonable to believe that a high school of a hundred and fifty enrollment or even less, could achieve a high degree of success with such a group if its music program has been in progress for a few years. "Even in the smaller schools one can still aim at a balance in instrumentation that will lead closer to perfection." "In the large centers nothing short of a full symphony instrumentation should be considered satisfactory." Normann goes further to emphasize the general agreement that exists regarding these standards: ". . . So widely spread has become this standard that we are forced to conclude that the conductor who fails to approximate it is not measuring up to his job."[33]

The standard for school band instrumentation seems to be completely accepted throughout the country. This fact is reflected in part by the vast amounts of band literature. Listed below are two sets of minimum essential instrumentations for school bands, one as proposed by the Music

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[32] Music Supervisors Research Council, loc. cit.

[33] Theodore F. Normann, op. cit., p. 89.

Supervisors National Conference,[34] and the other as proposed by the University of Wisconsin.[35]

Music Supervisors National Conference List

> Eight B flat clarinets, one flute and piccolo, one oboe, one bassoon, four cornets or trumpets, one baritone, two trombones, two tubas (one E flat and one double B flat), three French horns in F or E flat and two percussion with instruments added in the following order: two B flat clarinets, one additional French horn, one trombone, one E flat clarinet, one alto clarinet, one bass clarinet, two trombones, four saxophones.

University of Wisconsin List

> Six B flat clarinets, one flute, one piccolo, one oboe, one bassoon, four cornets or trumpets, one baritone, two trombones, two French horns, two tubas (one E flat and one double B flat), two percussion. Instruments are added in the following order: Two or more B flat clarinets, two French horns, one trombone, one E flat alto clarinet, one bass clarinet, one small E flat clarinet, four saxophones (B flat soprano, E flat alto, B flat tenor, E flat baritone).

A comparison of the two lists of instruments quoted above will show that they are almost identical, which seems further evidence of the wide acceptance of a standard instrumentation for school bands. Following is another table of recommended instrumentation for different sizes of school bands. This, however, appears to represent a more ideal standard.

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[34] Music Supervisors Research Council, loc. cit.

[35] Peter W. Dykema and Karl W. Gehrkens, op. cit., p. 143.

INSTRUMENTATION FOR CONCERT BANDS [36]

Instruments	Complete	Average	Small
Flutes and Piccolo	5 or more	4 or more	2 or more
E Flat Clarinets	1	0	0
Oboes	2	2	1
English Horn	1	0	0
B Flat Clarinets	24 or more	18 or more	12 or more
Alto Clarinets	2 or more	2 or more	1 or more
Bass Clarinets	2 or more	2 or more	1
Bassoons	2 or more	2	1
Saxophones	3 or more	2 or more	1 or more
B Flat Cornets	4	4	3
B Flat Trumpets	2	2	2
Fleugel Horns	1	0	0
French Horns	4 or more	4	3 or 4
Trombones	4 or 5	3 or more	2 or 3
Baritones	2 or 3	2	1 or 2
E Flat Basses	2	1	1
Double B Flat Basses	4 or 5	3 or 4	2 or 3
String Basses	2 or more	1 or more	
Timpani	1	1	1
Other Percussion	4	3	2
Minimum Listed	74	57	36
Maximum Listed	80	60	40

[36] Daniel L. Martino, "Instrumentation," Concert Bands, Indiana University Auditorium, Bloomington, Indiana, no date.

The most essential factor to be kept in mind in the discussion of proper instrumentations for school band and orchestra is balance. With proper balance lacking in either of these organizations, whether it be the actual learning of the music or the performance of it, the results will definitely be imperfect. Correct balance should be the ultimate goal of every musical organization.

It has been the usual practice in high schools to expect a number of the students of the band and orchestra to supply their own instruments. The instruments included as student owned are usually the more popular ones and the less expensive ones. In the case of the less popular and more cumbersome instruments music educators generally agree that they should be owned by the school. Wilson makes the following suggestions in regard to school owned instruments:

1. Percussion
    a. Bass Drum: for each band and for orchestras numbering more than twenty players.
    b. Tympani (kettle drums): one pair for each orchestra or band numbering more than thirty players. Pedal tympani are superior to the ordinary type, but they are much more expensive. Only large high schools with a standard size orchestra and a player well schooled in their care and manipulation need pedal tympani.
    c. Cymbals: one pair (Turkish) for every band or orchestra.
    d. Field drums: necessary for marching bands and for drum and bugle corps.
    e. Chimes: one set for a band or orchestra of over sixty players.
    f. Harp: one or two for an orchestra of over seventy players.

g. Celeste: one for an orchestra of ninety players.

2. Strings
   a. Double basses: one for each ten members of the orchestra. String basses made of metal are better for school use.
   b. 'Cellos: one for each four violinists in the orchestra, purchased as need arises.
   c. Violas: one for each four violinists in the orchestra. A number of violas are needed to start beginners and to interest students in this instrument.
   d. Violins: seldom necessary for schools to purchase violins because they are popular with students.
3. Brass
   a. Tubas: one for each ten members of the band. The Sousaphone type is better for bands and the upright for orchestra.
   b. French horn: two for each orchestra of thirty players and four for each band of thirty players or more. A standard sized orchestra can use six horns. Students will purchase French horns after they have learned to play them, but each school needs at least two for the purpose of starting beginners.
   c. Baritone: one for each band of twenty players. It is usually necessary for the school to own one baritone.
4. Woodwinds
   a. Oboe: one for every orchestra of thirty players; two for orchestra of sixty players; schools should purchase only the conservatory system.
   b. Bassoon: one for every orchestra or band of forty players. School should purchase only the Heckel system.
   c. Contra-bassoon: one for an orchestra of ninety players.
   d. Alto clarinet: one for each eight B flat clarinet players in the band.
   e. Bass clarinet: one for each eight B flat clarinet players in the band.
   f. Bass saxophone: one for a band of sixty players.[37]

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[37] Harry Robert Wilson, op. cit., pp. 331, 332.

A very similar table is found in Normann's book, Instrumental Music in the Public Schools, quoted from the Research Council of the Music Supervisors National Conference.

Dykema and Gehrkens recommend that to insure adequate functioning of band and orchestra it is highly desirable that the school own a sufficient number and variety of instruments.

Because of the problem of purchasing instruments wisely, which is so perplexing to many schools, the proposed eight year purchasing plan quoted here may prove enlightening. (See following page.)

IV. THE SCHOOL MUSIC LIBRARY

The adequacy of a high school music library will frequently be revealed by the quality of the school choral, band, or orchestra concert. An interesting selection of musical compositions on a concert program reflects a well-developed repertory of music. But an adequate repertory of scores is not sufficient if the music library is to serve as a stimulating influence for the student body.

Recommended composition of the school library. Mursell in his book, Education for Musical Growth, offers this list of items to be included in the music library:

SUGGESTED EIGHT-YEAR PROGRAM OF INSTRUMENT PURCHASES BY THE BOARD OF EDUCATION FOR THE AVERAGE-SIZED BAND[38]

Instruments and Number School Should Own	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.	6th Yr.	7th Yr.	8th Yr.
Piccolo in C (1)					1			
Oboe (2)		1		1				
English Horn (1)								1
Bassoon (2)			1		1			
Alto Clarinet (2)				1			1	
Bass Clarinet (2)	1					1		
Tenor Saxohpone (1)					1			
Baritone Saxophone (1)								1
Alto Horn (2)	1	1						
French Horn (5)		1	1	1	1	1		
Baritone or Euphonium (2)				1				1
Bass Trombone (1)							1	
E Flat Tuba (1)	1							
Double B Flat Tuba (5)		1	1	1		1	1	
String Bass (1)					1			
Snare Drum ($6\frac{1}{2}$" x 15") (1)		1						
Street Drum (12" x 16") (3)				1			1	1
Concert Bass Drum (1)	1							
Tympani (1 pair)						1		
Cymbals (2 pairs)	1							1
Bell Lyra (2)					1		1	
Miscellaneous Percussion Equipment (as needed)	1	1	1	1	1	1	1	1

[38] Daniel L. Martino, "Administration of Instrumental Music," Indiana University, Bloomington, Indiana, 1949.

> . . . Music books and song books both published for school use and commercial use, sheet music, scores, phonograph records, pictures, maps, charts, film strips, motion picture films, books, magazine articles, newspaper clippings, accounts of interesting and significant projects and activities in music education carried on in the home system or observed or reported from elsewhere, samples of student work such as compositions, recordings, and so forth.

In conclusion Mursell makes this very valuable comment regarding this collection of materials, "The collection should not be an inert, physical mass but a living and constructive influence upon the work."[39]

As in every other course of study in music, the learning will be greatly enhanced by the collection of a rich and diversified quantity of materials in the music library.

V. COURSE OFFERINGS

Facilities and equipment will greatly determine the scope of the music curriculum of any high school. Conversely, it is equally true that a dynamic music curriculum, even though it be meager in scope, will go far in the promotion of plans for more suitable physical conditions.

Recommended course offerings. Following is a list of

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[39] James L. Mursell, Education for Musical Growth (New York: Ginn and Company, 1948), pp. 302, 303.

courses compiled by Dykema and Gehrkens which they feel are the easiest music courses to present under practically all circumstances: ". . . Vocal--Boys' glee club, Girls' glee club, General chorus, Small ensembles, music assembly, . . . Instrumental--Elementary orchestra, small ensembles, and individual instrumental lessons."[40] In schools under the most extreme conditions the authors suggest that every attempt should be made to abide by these minimum, essential standards: "(1) Boys' glee club, (2) Girls' glee club, (3) Music assembly, (4) Orchestra, (5) Credit for private study. . ."[41] The following courses are recommended by Dykema and Gehrkens for schools from 100 to 500 enrollment: ". . . Vocal--glee club for boys, a glee club for girls, some kind of a mixed chorus open to all, possibly an a cappella choir, and probably either an elementary sight singing class or a 'general music' class for those who have had little or no music."[42] For schools over 500, the author suggests that the following courses should be added: ". . . Voice class for both boys and girls and a cappella choir. Instrumental work. . . elementary string and wind classes, elementary and advanced piano classes, elementary

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[40] Peter W. Dykema and Karl W. Gehrkens, op. cit., p. 32.

[41] Ibid., p. 33.

[42] Ibid., pp. 34-35.

general music course and music appreciation."[43]

In the Music Education Source Book are found the following recommended lists of music courses and activities. The first list quoted below is titled "Suggested Courses and Activities" and the second is titled "Minimum Activities."

Suggested Courses and Activities

(1) General Music Course. . . . The content of this course should be limited to what reasonably can be considered within the range and capacity of the average student. . . .
(2) Assembly Singing. . . . In addition to the especially planned and programmed music assemblies which have been productive of good results in many schools, it is urged that music teachers seek opportunity for group singing of even one or two songs in home rooms, during recreation periods, and in general assemblies. . . .
(3) Performing Groups. . . . There are those students who like to make music for themselves, and for them the course should provide for performing groups of all kinds. . . .
(4) Individual and Group Lessons. . . . Every student in choir, orchestra and band should have instruction on his instrument or in voice. . . . Those who do not study with a private teacher should receive individual or class instruction from the music teacher in the school during school hours.
(5) Music Appreciation.
(6) Music History.
(7) Theory and Harmony.

Minimum Activities

(1) Assembly singing should be scheduled for all students. If no other music activities are available, at least recreational singing should be provided.
(2) Special instrumental and vocal performance groups should be encouraged. . . .
(3) There should be provision for ability segregation.

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[43] Ibid., pp. 35-37.

> (4) Theory classes should be provided for the specially gifted and interested students.
> (5) The playing of the informal instruments should be encouraged as an extra-curricular activity.[44]

Comparison of the foregoing lists of music courses and activities and taking into account also the sources of these lists would indicate general acceptance of minimum standards for high school music curricula.

In 1948, Heltman submitted as his master's thesis a survey of the status of music programs as found in the county, independent, smaller and municipal schools, the North Central accredited school systems, and the state-supported teacher-preparing institutions. This investigation is especially significant here because included in its several aims is an appraisal of music education in the public high schools of New Mexico. Heltman sought to compare rather generally the then existing music curriculum in the high schools with the preceding recommendations quoted in the Music Educators Source Book. The resulting conclusions are these:

> The high school music education program has perhaps received more emphasis than other levels of the school system because of the prominent place the high school music organization often holds in the public eye.
> Only in the rural school systems of the state is the music program woefully inadequate; however, some effort is being made to improve the program in the

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[44] Hazel Nohovec Morgan, Ed., Music Education Source Book (Chicago: Music Educators National Conference, 1947), pp. 14-16.

rural schools.[45]

Heltman credits the music festivals and The New Mexico Music Educators Association as outstanding motivators in the advancement of music education in New Mexico. Among his recommendations are: a state-wide adopted course of study in music and a state music supervisor. Since this thesis was written, the state department has appointed a state music supervisor and it has also issued a guide titled Music, a Guide in Music Education for the Schools of New Mexico.

The significance of this chapter should be apparent in the answer to the question posed at the outset: "Can there be a certain agreed-upon criteria by which it would then be possible and valuable to determine whether or not a public high school has the minimum essential facilities and equipment needed to provide youth with musical opportunities which are the common need today?" The writer believes that sufficient evidence was cited throughout this chapter to warrant the conclusion that there is enough common agreement among music educators regarding standards for music rooms, equipment, and curriculum to suggest a strong possibility that a set of criteria could be organized by which the

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[45] Rollie V. Heltman, "A Survey of Music Education in New Mexico," unpublished master's thesis, The University of New Mexico, 1949, pp. 69, 77, 78.

adequacy of music facilities, equipment, and course offerings of a high school might be evaluated at least in a quantative sense. The approaching chapter will carry out such an evaluation.

CHAPTER III

ANALYSIS OF DATA

I. INTRODUCTION

It has been emphasized that the primary objective of this study is a quantitative evaluation of music facilities, equipment, and course offerings as they exist in a group of New Mexico public high schools. It must be understood, however, that such quantitative treatment can never be totally divorced from some of the more obvious qualitative aspects of these conditions. Therefore it will occur in several instances that the quality of conditions will be implied by the existing quantity. In such instances the implications seem to justify referring to both aspects of conditions.

Before embarking on the process of evaluation, a brief examination of the questionnaires used for gathering the data and a discussion of several problems that arose is necessary at this point. Item II of Questionnaire A reads: "Following is a list of courses in music that are taught in high schools throughout the country. Please indicate enrollment in these courses." The purpose of the item was primarily to determine the scope of the music curriculum, but in asking for the number of students enrolled in these courses it sought to determine also, to a degree, the efficacy of the music

curriculum. In many cases the respondents merely checked the courses which they offered, fulfilling the first part of the question only; consequently the representation for the second part of this question is quite low and therefore, that part will be omitted.

Item III of Questionnaire A reads: "Following is a list of facilities used in teaching music. Please indicate your situation by placing the correct figure under each heading." The headings are: number of rooms available, length, width, and height of the rooms. This item was to determine whether or not the schools owned these facilities and to determine whether or not the sizes of rooms met the standards recommended by the New Mexico Department of Education.[46]

The reasons for not achieving complete success with these two items are not clearly known. It may have been respondents' lack of care in reading the questions or absence of records giving the total information called for.

In Questionnaire B, Item VI reads: "Place what you consider to be essential to each of the following categories:

(a) Different compositions for score libraries
(b) Compositions for record libraries
(c) Books for music reference libraries

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[46] Bulletin, Music, a Guide in Music Education for the Schools of New Mexico, Junior and Senior High School, p. 83.

Members of the panel were to state the minimum essential number of compositions and books for the given libraries. Five out of ten responded to this item satisfactorily. The failure of the item is evident in the unfortunate wording and also in the fact that some of the members commented that the answer to such a question was difficult to determine. Since five of the members of the panel supplied responses to Item VI, it seems valid to use their standards for evaluating the school libraries.

II. EVALUATION OF FACILITIES

A study of the data presented in Table I shows that thirty-three per cent of all schools reporting have no school auditorium. The auditorium, although not exclusively a music facility in most cases, is a vital asset to every high school music program. It is by means of the school auditorium that a school is able to share the musical accomplishments of its students most advantageously with the public. It supplies a music program with a most suitable means of disseminating music culture throughout the community. It was on this basis that the school auditorium was included as a music facility.

Bulletin No. 17 of the Music Educators National Conference makes this recommendation: ". . . Schools in which only one music teacher is employed should have one all-purpose music room equipped for chorus, orchestra, and

TABLE I

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR AUDITORIUMS FOR MUSIC PERFORMANCE WITH THOSE REPORTED BY THE SCHOOLS SURVEYED

		Auditoriums	
School Size	Number of Schools	Panel's Standard for Number of Auditoriums	Number of Schools Meeting Standard Set by Panel
0-100	29	1	13
100-200	17	1	15
200-500	12	1	9
Above 500	9	1	8
All schools	67	1	46

band. . ."[47] Examination of Table XVI reveals that there are thirty schools employing only one music instructor. Ten of these schools do not provide any type of music classroom as such. This would indicate that twenty of these schools meet the recommendations of Bulletin No. 17 to the degree that they have one or more music classrooms.

Among the ten schools that have only one music instructor but no music classroom, eight schools are able to provide an auditorium. This could mean that these schools, although lacking in proper music classrooms, are able to afford their students some space for music instruction by utilizing the auditorium.

Concerning the two schools in this particular group that do not have either an auditorium or a music room, it is extremely difficult to determine how the music instructor accomplishes his work. Probably he is given access to one of the regular classrooms. However, such drastically limited conditions in facilities imply the existence of a poorly developed music program.

Study of data given in Table II reveals that forty-six per cent of all the schools reporting do not meet the standards set by the panel. The highest degree of inadequacy appears in the smallest schools. Examination of Table XVII on page shows that in the smaller groups of schools eleven

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[47] Music Educators Research Council, op. cit., p. 12.

TABLE II

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR SPECIALLY DESIGNED MUSIC CLASSROOMS WITH THOSE REPORTED BY THE SCHOOLS SURVEYED

School Size	Number of Schools	Specially Designed Classroom		
		Panel's Standard for Number of Classrooms	Mean Number of Classrooms in Schools	Number of Schools Meeting Standard
0-100	29	1	0.38	11
100-200	17	1	1.76	14
200-500	12	2	2.58	8
Above 500	9	3	2.33	4
All schools	67			37

offer no music instruction. This would cause the total percentage of schools not meeting the panel standards to rise considerably.

Data in Table II shows further that in the upper three classes the percentage of schools not meeting the standard proposed is low (approximately thirty-two per cent). It must be noted that the standard of three music classrooms for schools having more than 500 students might be considered somewhat high by school building authorities.[48] Also it could be that many schools in the two upper classes might have an adequate, all-purpose general music room as described in Bulletin No. 17. If this assumption is valid, the facilities reported may be more satisfactory than Table I indicates.

III. EVALUATION OF EQUIPMENT

A study of Tables III, IV, V, and VI shows that approximately two thirds of the schools fall far short of standards for the seven items of equipment studied. Furthermore, it reveals that the larger the school the further will it be from reaching its standard. There are only two schools in the entire group of schools reporting that meet the standards of the panel for music stands. This

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[48] Merle A. Stoneman, Knute O. Broady, and Alanson D. Brainard, Planning and Modernizing the School Plant (Lincoln, Nebraska: University of Nebraska Press, 1949), p. 42.

TABLE III

COLLATION OF THE PANEL'S MINIMUM STANDARDS
FOR EQUIPMENT FOR MUSIC INSTRUCTION
WITH THOSE REPORTED BY 29 SCHOOLS HAVING 0-100 POPULATION

Equipment Item	Panel's Mean Number of Equipment Items	Schools' Mean Number of Equipment Items	Number of Schools Meeting or Surpassing the Panel's Mean
Music Stands	29	5.83	1
Band Uniforms	40	5.45	0
Pianos	2	1.07	9
Chalkboards	1	0.17	2
Phonographs	1	0.79	14
Recording Equipment	1	0.24	7
Choir Robes	41	6.17	2

TABLE IV

COLLATION OF THE PANEL'S MINIMUM STANDARDS
FOR EQUIPMENT FOR MUSIC INSTRUCTION
WITH THOSE REPORTED BY 17 SCHOOLS HAVING 100-200 POPULATION

Equipment Item	Panel's Mean Number of Equipment Items	Schools' Mean Number of Equipment Items	Number of Schools Meeting or Surpassing the Panel's Mean
Music Stands	46	15.47	1
Band Uniforms	58	17.94	0
Pianos	3	2.18	7
Chalkboards	1	0.35	5
Phonographs	2	1.11	5
Recording Equipment	1	0.59	8
Choir Robes	49	8.88	1

TABLE V

COLLATION OF THE PANEL'S MINIMUM STANDARDS
FOR EQUIPMENT FOR MUSIC INSTRUCTION
WITH THOSE REPORTED BY 12 SCHOOLS HAVING 200-500 POPULATION

Equipment Item	Panel's Mean Number of Equipment Items	Schools' Mean Number of Equipment Items	Number of Schools Meeting or Surpassing the Panel's Mean
Music Stands	66	28.17	0
Band Uniforms	88	51.92	0
Pianos	3	2.92	6
Chalkboards	3	0.33	1
Phonographs	3	1.50	1
Recording Equipment	1	1.58	7
Choir Robes	86	14.00	0

TABLE VI

COLLATION OF THE PANEL'S MINIMUM STANDARDS
FOR EQUIPMENT FOR MUSIC INSTRUCTION
WITH THOSE REPORTED BY 9 SCHOOLS HAVING ABOVE 500 POPULATION

Equipment Item	Panel's Mean Number of Equipment Items	Schools' Mean Number of Equipment Items	Number of Schools Meeting or Surpassing the Panel's Mean
Music Stands	85	39.22	0
Band Uniforms	99	68.00	0
Pianos	5	2.22	0
Chalkboards	3	0.00	0
Phonographs	4	1.22	0
Recording Equipment	1	0.89	6
Choir Robes	94	21.33	1

indicates a high degree of inadequacy. However, Bulletin No. 17 suggests that in many cases one music stand can serve two students simultaneously at rehearsals or performances. Consideration of this factor might indicate less inadequacy regarding this particular item than is apparent.

Tables III, IV, V, and VI reveal that the supply of band uniforms in all classes of schools is inadequate. The standards given for this item might seem somewhat high; however, the inadequcy is clearly shown in the mean numbers of uniforms for each class of schools. In fact, a band meeting the minimum essential instrumentation, which was stated to be approximately twenty-four players, could not be completely uniformed with the much smaller numbers of uniforms possessed by the two smaller classes of schools. Further study of the tables reveals that all schools do quite well in approaching the panel standard for school pianos.

The high degree of inadequacy throughout all classes of schools reporting with respect to chalkboards is undoubtedly less serious than it appears. While many schools do not have chalkboards equipped with permanently drawn music staves, many may have the special device commonly used for drawing staves on the ordinary chalkboard, in which case conditions might be quite satisfactory.

Regarding phonographs, as shown in the tables, the mean percentage of schools meeting the panel's standards is

only approximately thirty per cent. This is a serious inadequacy since the success of music courses such as music history and music appreciation is dependent on a good quality phonograph.

Since recording equipment is a recent requirement for the teaching of music, it might be expected that its presence in high school music departments would be infrequent. However, the tables show this particular item to be present in twenty-eight or approximately forty-two per cent of the schools reporting. Its absence from a high school music department is probably not of great consequence.

Regarding choir robes, Tables III, IV, V, and VI reveal that the degree of inadequacy throughout all the schools reporting is exceptionally high. Accountable for this extreme lack may be the fact that many schools adopt the common practice of having the students provide their own costumes for choral performances. Many times the school chorus may appear in formal dress, which might even be more suitable for some occasions than the common choir robes. Consideration of these possibilities might show this inadequacy to be of less importance than is apparent.

IV. ITEMS OF EQUIPMENT FOR INSTRUCTION AND STORAGE

Table VII shows a list of eight additional items of equipment recommended by Bulletin No. 17 and the National

TABLE VII

ITEMS OF EQUIPMENT FOR INSTRUCTION AND FOR STORAGE AS RECOMMENDED BY BULLETIN NO. 17 OF THE MUSIC EDUCATORS NATIONAL CONFERENCE AND AS RESTATED IN BULLETIN NO. 9 OF THE NEW MEXICO STATE DEPARTMENT OF EDUCATION AND THE NUMBER OF SCHOOLS HAVING SUCH EQUIPMENT

	School Population			
Equipment Item	0-100 29 Schools	100-200 17 Schools	200-500 12 Schools	Above 500 9 Schools
Director's Stand and Podium	8	8	10	7
Risers	1	4	6	5
Cabinets	6	8	10	4
Roll-away Racks	0	0	1	0
Lockers	1	2	4	1
Music Folder Cabinets	3	4	9	6
Percussion Cabinets	1	2	7	4
Shelves	6	8	8	4

Music Educators Conference and the New Mexico State Department of Education for the adequate functioning of high school music programs. The first two items are recommended for effective instruction in instrumental and choral classes and the other six are items of storage equipment. The table shows the percentage of schools having these items of equipment.

Approximately forty-nine per cent of the schools reporting have a director's stand and podium. Risers are present in only twenty-four per cent of the schools reporting. A comparison of these figures might indicate that the much lower percentage for risers implies that schools are somewhat more concerned with the needs of instrumental classes than they are with providing proper equipment for choral organizations.

Regarding the items of storage equipment as a whole, a study of Table VII shows that the number of schools owning the different items of storage equipment is extremely low. The absence of such equipment is discouraging to the instrumental program of any school and such conditions should be alleviated.

V. INSTRUMENTS FOR BAND AND ORCHESTRA

Instrumentation in small schools (0-100 students). Examination of the data presented in Table VIII shows that

TABLE VIII

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 29 SCHOOLS HAVING 0-100 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Trumpet	1	0.48	3
Cornet	4	0.89	3
French Horn	3	0.10	0
Alto Horn	2	0.38	3
Mellophone	1	0.03	1
Baritone Horn	2	0.38	1
Trombone	3	0.31	2
Sousaphone	2	0.10	0
E flat Tuba	0	0.10	3
Double B flat Tuba	0	0.07	2
Piccolo	1	0.17	1
Flute	2	0.14	0
Oboe	1	0.0	0
English Horn	0	0.0	0
A Clarinet	0	0.03	1
B flat Clarinet	9	1.03	1
Alto Clarinet	1	0.03	1
Bass Clarinet	1	0.03	1

TABLE VIII (continued)

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 29 SCHOOLS HAVING 0-100 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Bassoon	1	0.0	0
Alto Saxophone	1	0.52	4
Tenor Saxophone	1	0.14	4
Baritone Saxophone	1	0.0	0
Contrabassoon	0	0.0	0
Violin	8	1.90	2
Viola	2	0.03	0
Cello	2	0.14	1
Bass Viol	1	0.07	2
Harp	0	0.03	1
Cymbals	1	0.31	4
Glockenspiel	1	0.0	0
Tympani	1	0.0	0
Concert Snare Drum	1	0.24	3
Parade Snare Drum	3	0.34	2
Concert Bass Drum	1	0.07	2
Parade Bass Drum	1	0.17	4
Chimes	0	0.34	1

the smallest schools provide some number of every instrument required by the panel in the brass choir, plus tubas. Since tubas and sousaphones are interchangeable it is permissible to include them in a single category. In the woodwind choir the table shows that the schools do not have any number of oboes, baritone saxophones, and bassoons---three instruments required by the panel. Many educators are of the opinion that because the oboe and the bassoon are extremely difficult instruments to play, they should not be included in the instrumentation of small bands. The A clarinet which appears in the table is recommended by the panel for only the largest schools.

In the string choir these schools have one instrument that is not required by the panel for this size school. In the percussion choir the schools are lacking in glockenspiels and tympani. Here again some educators would suggest that the absence of tympani in this small class of schools might not be a serious lack, since sometimes other instruments of the percussion choir can serve as substitutes reasonably well.

The instrumentation called for by the panel in Table VIII calls for approximately a thirty-four piece band and an orchestra of approximately twenty-six pieces. Comparison of these two sets of instrumentation with the minimum standards recommended by the Music Supervisors National Conference quoted on pages 28, 29 and 30 might

indicate that the panel's minimum standards are unreasonably high. However, a comparison of the schools' means with the table just cited still shows that this group of schools is extremely deficient.

The general implications of this table are that the instrumental organizations in these schools are of inferior quality, and furthermore, that there seems to be a lack of knowledge of what is considered balanced instrumentation. This is revealed by the presence of such instruments as the A clarinet, the harp, and the chimes, which according to the panel, should not appear in the instrumentation for this group of schools. On the other hand, it must be understood that this table includes both student-owned and school-owned instruments; hence it is possible that the three surplus instruments might be owned by students. It could be also that the school's individual needs demand the presence of an A clarinet, harp and chimes.

Instrumentation in schools of 100-200 students. Examination of the data presented in Table IX shows that this second group of schools have some number of each of the instruments required for the bass choir by the panel, plus E flat tubas. As in reporting instrumentation in the first class of schools, sousaphones have been combined with tubas.

In the woodwind choir, the schools provide a number

TABLE IX

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 17 SCHOOLS HAVING 100-200 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Trumpet	2	2.29	9
Cornet	6	3.24	5
French Horn	3	0.18	0
Alto Horn	2	1.12	4
Mellophone	1	0.24	3
Baritone Horn	2	0.76	4
Trombone	4	2.06	3
Sousaphone	2	0.82	5
E flat Tuba	0	0.24	3
Double B flat Tuba	1	0.18	2
Piccolo	1	0.06	1
Flute	3	0.29	0
Oboe	1	0.0	0
English Horn	0	0.0	0
A Clarinet	0	0.12	1
B flat Clarinet	12	4.35	2
Alto Clarinet	1	0.24	3
Bass Clarinet	1	0.0	0

TABLE IX (continued)

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 17 SCHOOLS HAVING 100-200 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Bassoon	1	0.0	0
Alto Saxophone	2	1.53	4
Tenor Saxophone	1	0.35	5
Baritone Saxophone	1	0.18	3
Contrabassoon	0	0.0	0
Violin	13	1.12	0
Viola	4	0.06	0
Cello	4	0.06	0
Bass Viol	2	0.06	0
Harp	0	0.0	0
Cymbals	1	0.70	9
Glockenspiel	1	0.12	2
Tympani	1	0.0	0
Concert Snare Drum	1	0.65	9
Parade Snare Drum	3	1.29	4
Concert Bass Drum	1	0.47	7
Parade Bass Drum	1	0.59	10
Chimes	0	0.06	1

of all the instruments required except the oboe, bassoon, and bass clarinet. The A clarinet is also provided but it is not recommended for this size of school by the panel. For this size of school the absence of the oboe and the bassoon is probably more serious than it is for the smallest schools.

A number of all the instruments required for the string choir are provided. In the percussion choir the tympani is the only instrument that is absent. Here also the absence of tympani may be more serious in this group of schools than it was in the first class.

The instrumentation required by the panel as shown in Table IX calls for a band of approximately forty-six pieces and an orchestra of approximately thirty-eight pieces. These seem to be more conservative figures than were given for the previous size of schools. The overall supply of instruments as shown in this table appears to be highly inadequate. A comparison of the means provided by these schools with the minimum standards quoted on pages 28, 29 and 30, further emphasizes the inadequacy of these schools.

Instrumentation for schools of 200-500 students. Examination of the data presented in Table X shows that this third group of schools has a number of all the instruments of the required brass choir plus E flat tubas. The woodwind choir would be complete except for the absence of the English

TABLE X

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 12 SCHOOLS HAVING 200-500 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Trumpet	3	6.25	6
Cornet	7	9.50	6
French Horn	4	2.50	4
Alto Horn	2	1.50	7
Mellophone	1	1.00	5
Baritone Horn	3	2.42	4
Trombone	5	6.66	9
Sousaphone	4	2.75	4
E flat Tuba	0	0.17	2
Double B flat Tuba	1	0.25	2
Piccolo	1	0.33	4
Flute	5	3.08	3
Oboe	1	1.0	8
English Horn	1	0.0	0
A Clarinet	0	1.75	2
B flat Clarinet	15	18.25	6
Alto Clarinet	1	0.25	3
Bass Clarinet	2	0.67	1

TABLE X (continued)

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 12 SCHOOLS HAVING 200-500 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Bassoon	2	0.25	1
Alto Saxophone	3	4.17	7
Tenor Saxophone	2	2.00	7
Baritone Saxophone	1	0.83	10
Contrabassoon	0	0.0	0
Violin	17	8.50	2
Viola	6	0.50	0
Cello	6	0.67	0
Bass Viol	4	0.42	0
Harp	0	0.0	0
Cymbals	2	1.17	2
Glockenspiel	1	1.17	10
Tympani	1	0.67	7
Concert Snare Drum	2	0.75	5
Parade Snare Drum	4	5.08	7
Concert Bass Drum	1	0.83	10
Parade Bass Drum	2	1.42	4
Chimes	1	0.08	1

horn. Here again the A clarinet is present. The string choir is complete. Both the string and the percussion choirs are complete as far as the kinds of instruments are concerned.

The instrumentations called for by the panel in Table IX require a band of approximately sixty-six pieces and an orchestra of about fifty pieces. In the case of the band instrumentation, the schools meet the standards reasonably except in a few extremely weak places. In a few other places the panel means are surpassed. This seems to indicate that many of these schools have fairly adequate band instrumentations. The orchestra instrumentation is quite deficient. Accountable for these conditions is probably the common acceptance of the band and the general lack of acceptance of school orchestras in New Mexico.

Instrumentation for schools of 500 or more students. Examination of the data presented in Table XI shows that the largest schools provide a number of all the instruments required for the brass choir plus the E flat tuba. The woodwind choir is lacking both the contrabassoon and the A clarinet. The absence of these two instruments would probably never cause extreme hardships in any high school instrumental organization. The string choir is complete. The absence of the harp in the percussion choir is probably

TABLE XI

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 9 SCHOOLS HAVING ABOVE 500 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Trumpet	4	3.56	5
Cornet	10	11.00	3
French Horn	6	5.33	4
Alto Horn	3	1.33	1
Mellophone	1	0.89	5
Baritone Horn	4	3.00	2
Trombone	7	7.33	4
Sousaphone	5	4.00	2
E flat Tuba	0	0.78	4
Double B flat Tuba	2	0.11	0
Piccolo	2	1.67	5
Flute	6	4.11	2
Oboe	2	1.56	2
English Horn	1	0.11	1
A Clarinet	1	0.0	0
B flat Clarinet	20	23.44	2
Alto Clarinet	2	0.89	2
Bass Clarinet	3	1.33	1

TABLE XI (continued)

COLLATION OF THE PANEL'S MINIMUM ESSENTIAL STANDARDS OF INSTRUMENTS NECESSARY FOR BAND AND ORCHESTRA INSTRUCTION WITH THOSE REPORTED BY 9 SCHOOLS HAVING ABOVE 500 POPULATION

Instruments	Panel's Mean Number of Instruments	Schools' Mean Number of Instruments	Number of Schools Meeting or Surpassing the Panel's Mean
Bassoon	2	1.00	2
Alto Saxophone	4	5.44	4
Tenor Saxophone	2	2.22	5
Baritone Saxophone	2	0.78	0
Contrabassoon	1	0.0	0
Violin	24	11.00	1
Viola	8	2.22	0
Cello	8	3.00	0
Bass Viol	5	2.00	1
Harp	1	0.0	0
Cymbals	2	1.56	5
Glockenspiel	2	1.44	2
Tympani	2	0.89	0
Concert Snare Drum	2	1.89	6
Parade Snare Drum	6	7.11	7
Concert Bass Drum	1	1.11	7
Parade Bass Drum	2	1.33	4
Chimes	1	0.11	1

somewhat more important.

The instrumentation called for by the panel in Table XI requires a band of approximately ninety pieces and an orchestra of approximately sixty-five pieces. Except in a few extreme cases these schools come up to the standards set for band instrumentation quite favorably. Regarding the orchestra instrumentation, the table shows these schools to be also highly inadequate.

Summary of instrumentation in all schools. Study of Tables VIII, IX, X, and XI together shows that instrumentations vary in adequacy in direct proportion to the size of the schools. The cause of this is probably best evident in the following statement:

> Size of school: 0-100: 7 out of 29 schools report having budget for music program; mean for these schools is $253.57.
> Size of school: 100-200: 6 out of 17 schools have a budget for music program; mean for these schools is $308.33.
> Size of school: 200-500: 5 out of 12 schools reporting have a budget for music program; mean for these schools is $1356.20.
> Size of school: 500 up: 5 out of 9 schools reporting have a budget for music program; mean for these schools is $1900.00.

The great deficiency of support for school orchestras persists throughout the schools. An interesting but unaccountable situation is the presence of the A clarinet in all schools except in those in which it is required by the panel.

Observation of Table XII reveals that in no instance is there any unanimity of opinion as to whether any of the instruments given in this list should be the property of the school.

VI. MUSIC LIBRARIES

Study of Tables XIII, XIV, XV, and XVI shows that in no school examined is there complete fulfillment of the standards set by the panel for the six designated libraries. Only half of the panel members agreed to these standards and their requirements may be somewhat high, but there seems to be no possible way of justifying the deplorable library conditions found throughout the entire range of schools as judged by those standards.

Examination of Tables XIX, XXI, XXIII, and XXV shows that the music courses most frequently occurring in the four classes of schools are girls' glee club, mixed chorus and band. Returning to Tables XIII, XIV, XV, and XVI, it is apparent that the libraries essential to the success of these courses, in practically every instance, are grossly deficient.

The schools in the 200-500 student class seem to be somewhat less deficient than the other three groups. The most serious deficiencies are evident in the smaller schools. In this group twenty-five out of twenty-nine, or approximately

TABLE XII

INSTRUMENTS WHICH THE PANEL RECOMMEND BE OWNED BY THE SCHOOLS

Instruments	Number of Experts Who State the Instrument Should Be School Owned
Sousaphone	8
Bass Viol	7
Bassoon	7
Bass Clarinet	6
French Horn	6
Oboe	6
Alto Clarinet	5
Baritone Horn	5
Baritone Saxophone	5
Glockenspiel	5
Tympani	5
Alto Horn	4
Cello	4
Concert Bass Drum	4
Parade Bass Drum	4
Concert Snare Drum	4
Parade Snare Drum	4
Cymbals	4
English Horn	4
Piccolo	4

TABLE XII (continued)

INSTRUMENTS WHICH THE PANEL RECOMMEND BE OWNED BY THE SCHOOLS

Instruments	Number of Experts Who State the Instrument Should Be School Owned
Chimes	3
Mellophone	3
Contrabassoon	2
Double B flat Tuba	2
Viola	2
A Clarinet	1
E flat Tuba	1
Cornet	1
Harp	1
Tenor Saxophone	1
Trumpet	1
Alto Saxophone	0
B flat Clarinet	0
Flute	0
Trombone	0
Violin	0

TABLE XIII

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR LIBRARIES FOR MUSIC INSTRUCTION WITH THOSE REPORTED BY 29 SCHOOLS HAVING 0-100 POPULATION

Libraries	Panel's Mean Number	Schools' Mean Number	Number of Schools Meeting or Surpassing the Panel's Mean	Number of Schools Having No Library Offerings
SCORE LIBRARIES				
Band Instruction	175	2.55	0	25
Orchestral Instruction	75	0.55	0	27
Choral Instruction	180	11.38	0	21
RECORD LIBRARIES				
Music Appreciation	120	6.03	0	22
Leisure Listening	88	2.51	0	23
BOOKS				
Reference	52	6.86	1	21

TABLE XIV

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR LIBRARIES FOR MUSIC INSTRUCTION WITH THOSE REPORTED BY 17 SCHOOLS HAVING 100-200 POPULATION

Libraries	Panel's Mean Number	Schools' Mean Number	Number of Schools Meeting or Surpassing the Panel's Mean	Number of Schools Having No Library Offerings
SCORE LIBRARIES				
Band Instruction	335	26.47	0	12
Orchestral Instruction	135	1.94	0	14
Choral Instruction	300	25.06	0	8
RECORD LIBRARIES				
Music Appreciation	180	5.65	0	12
Leisure Listening	132	7.12	0	10
BOOKS				
Reference	72	4.88	0	11

TABLE XV

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR LIBRARIES FOR MUSIC INSTRUCTION WITH THOSE REPORTED BY 12 SCHOOLS HAVING 200-500 POPULATION

Libraries	Panel's Mean Number	Schools' Mean Number	Number of Schools Meeting or Surpassing the Panel's Mean	Number of Schools Having No Library Offerings
SCORE LIBRARIES				
Band Instruction	630	357.00	3	0
Orchestral Instruction	410	8.92	0	7
Choral Instruction	480	166.75	2	1
RECORD LIBRARIES				
Music Appreciation	280	21.92	0	5
Leisure Listening	236	6.00	0	8
BOOKS				
Reference	101	5.25	0	6

TABLE XVI

COLLATION OF THE PANEL'S MINIMUM STANDARDS FOR LIBRARIES FOR MUSIC INSTRUCTION WITH THOSE REPORTED BY 9 SCHOOLS HAVING ABOVE 500 POPULATION

Libraries	Panel's Mean Number	Schools' Mean Number	Number of Schools Meeting or Surpassing the Panel's Mean	Number of Schools Having No Library Offerings
SCORE LIBRARIES				
Band Instruction	1120	247.22	0	0
Orchestral Instruction	720	43.33	0	4
Choral Instruction	860	130.00	0	1
RECORD LIBRARIES				
Music Appreciation	380	116.66	1	5
Leisure Listening	360	8.33	0	7
BOOKS				
Reference	133	11.67	0	4

eighty-six per cent of the schools, do not have band libraries at all; twenty-one of twenty-nine, or approximately seventy-two per cent of the schools do not have choral libraries; and sixteen of twenty-nine, or approximately fifty-five per cent, of these schools have absolutely no music library.

There is a possibility that, since the item from Questionnaire A concerned with the gathering of this particular part of the data read, "List only those scores for which you have an adequate number for choral or instrumental teaching," schools with inadequate score libraries did not respond at all. On the other hand, judging by the frequent absence of the other four libraries surveyed, it seems reasonable to conclude that Tables XIII, XIV, XV, and XVI present a close approximation of actual conditions.

The inferior quality of the total music program is strongly implied by these tables. The realization that the six libraries here discussed must necessarily reflect every type of school music activity, is not encouraging.

VII. MUSIC INSTRUCTORS

Table XVII presents the number of instructors available in the four groups of schools. It is difficult to equate part-time with full-time instruction, but it seems safe to conclude that in most instances full-time instructors are

TABLE XVII

FULL AND PART-TIME MUSIC INSTRUCTORS
IN THE FOUR SCHOOL POPULATION CLASSIFICATIONS

School Size	Number of Schools Employing Designated Numbers of Instructors*							
	0-0	0-1	0-2	0-3	1-0	1-1	1-2	2-0
0-100 (M: 1 instructor)**	10	15			3	1		
100-200 (M: 1 instructor)	1	2	1		5	7		1
200-500 (M: 2 instructors)			2	1	4	2		3
500 plus (M: 3 instructors)			2	1	1	2	1	2

* The numerals indicate, first, the full-time instructors and, second, the part-time instructors. These two are contracted to the following codes: 0-1 indicates the schools having no full-time instructors and one part-time instructor. 1-0 indicates one full-time instructor and no part-time instructors. The numbers appearing below and opposite the school sizes indicate the number of schools having that particular number and type of instructor.

** This indicates the mean number of full-time instructors which the panel considered an essential minimum.

preferable. This table shows that twenty-four of sixty-seven, or approximately thirty-six per cent, of all the schools reporting, offer only part-time music instruction. Sixteen per cent of all schools reporting indicate that they do not employ a music instructor. Twenty-seven of sixty-seven, or approximately thirty per cent of the schools meet the standard set forth by the panel. The employment of only part-time teachers in three of the schools in the group from 500 or more students implies a definite weakness.

The inadequate number of instructors as shown in this table, more than any other factor here considered, seems to reveal the general status of music education in the public high schools of New Mexico.

VIII. COURSE OFFERINGS

Tables XVIII, XX, XXII, and XXIV are concerned with the establishment of suitable index ratings from the data furnished by the panel regarding the importance placed upon the given list of course offerings, for the four classifications of schools. Tables XIX, XXI, XXIII, and XXV consist of derived index ratings which represent the status of these course offerings as they exist in the four classifications of schools; the index ratings of the panel; and a collation of the two sets of index ratings.

TABLE XVIII

RATING OF CURRICULUM OFFERINGS BY THE PANEL FOR SCHOOLS HAVING 0-100 POPULATION

Curriculum Offering	Individual Educators' Rating*					Index Rating**
	5	4	3	2	1	
Private Vocal	1	3	0	4	2	2.70
Private Instrumental	2	5	3	0	0	3.90
Boys' Glee Club	2	2	1	1	4	2.70
Girls' Glee Club	1	3	2	1	3	2.80
Acappella Choir	2	2	3	0	3	3.00
Mixed Chorus	6	3	1	0	0	4.50
Band	7	3	0	0	0	4.70
Orchestra	5	1	2	1	1	3.80
Music History	1	1	5	1	2	2.80
Music Appreciation	1	3	2	2	2	2.90
Elementary Theory	1	1	2	4	2	2.50
Sight Singing	1	1	3	2	3	2.50
Elementary Harmony	1	1	2	4	2	2.50

* The five-point rating is based on five degrees of importance or value as follows:
5. Greatest importance
4. Great importance
3. Moderate importance
2. Slight importance
1. No importance

TABLE XVIII

RATING OF CURRICULUM OFFERINGS BY THE PANEL
FOR SCHOOLS HAVING 0-100 POPULATION

(Explanation of asterisks in table continued)

** The rating index is obtained as follows for the first curriculum offering:

1	x	5	=	5
3	x	4	=	12
0	x	3	=	0
4	x	2	=	8
2	x	1	=	2
10				27

$$\frac{27}{10} = 2.70$$

Interpretation of the rating index is as follows:

No importance, 0-1.49
Slight importance, 1.50-2.49
Moderate importance, 2.50-3.49
Great importance, 3.50-4.49
Greatest importance, 4.50-5.00

TABLE XIX

COLLATION OF CURRICULUM OFFERINGS
OF 29 SECONDARY SCHOOLS HAVING ENROLLMENTS OF 0-100
WITH THE RATING INDICES OF THE PANEL

Curriculum Offering	Index Rating*	Percentage of Schools Offering	School Rating (%x5)**	Comparisons*** Below St'd.	Comparisons*** St'd. or Above
Private Vocal	2.70	0.0	0.0	X	
Private Instrumental	3.90	20.69	1.03	X	
Boys' Glee Club	2.70	6.89	0.34	X	
Girls' Glee Club	2.80	48.28	2.41	X	
Acappella Choir	3.00	6.89	0.34	X	
Mixed Chorus	4.50	20.69	1.03	X	
Band	4.70	27.59	1.38	X	
Orchestra	3.80	6.89	0.34	X	
Music History	2.80	0.0	0.0	X	
Music Appreciation	2.90	10.34	0.52	X	
Elementary Theory	2.50	6.89	0.34	X	
Sight Singing	2.50	17.24	0.86	X	
Elementary Harmony	2.50	6.89	0.34	X	

* The index rating was obtained from Table XVIII.

TABLE XIX

COLLATION OF CURRICULUM OFFERINGS
OF 29 SECONDARY SCHOOLS HAVING ENROLLMENTS OF 0-100
WITH THE RATING INDICES OF THE PANEL

(Explanation of asterisks in table continued)

** The percentage of schools offering a particular course was considered indicative of the importance attributed to that particupar course. Therefore, by multiplying the percentage of schools offering a course by the number 5, which indicates a course of greatest importance, it was possible to obtain the rating which the schools gave various courses.

*** The comparisons were based on the following ranges: 0-1.49, 1.50-2.49, 2.50-3.49, 3.50-4.49 and 4.50-5.00. If the school rating fell within the interval it was considered to have met the standard as established by the panel.

TABLE XX

RATING OF CURRICULUM OFFERINGS BY THE PANEL FOR SCHOOLS HAVING 100-200 POPULATION

Curriculum Offering	Individual Educators' Rating*					Index Rating**
	5	4	3	2	1	
Private Vocal	1	2	2	2	3	2.60
Private Instrumental	2	5	3	0	0	3.90
Boys' Glee Club	2	1	2	4	1	2.90
Girls' Glee Club	1	2	3	3	1	2.90
Acappella Choir	2	3	1	1	3	3.00
Mixed Chorus	6	4	0	0	0	4.60
Band	7	3	0	0	0	4.70
Orchestra	5	2	2	0	1	4.00
Music History	1	0	4	5	0	2.70
Music Appreciation	1	2	3	3	1	2.90
Elementary Theory	1	0	3	4	2	2.40
Sight Singing	1	1	5	2	1	2.90
Elementary Harmony	1	0	2	6	1	2.40

Note: The footnotes on Table XVIII apply to this table also.

TABLE XXI

COLLATION OF CURRICULUM OFFERINGS
OF 17 SECONDARY SCHOOLS HAVING ENROLLMENTS OF 100-200
WITH THE RATING INDICES OF THE PANEL

Curriculum Offering	Index Rating*	Percentage of Schools Offering	School Rating (%x5)**	Comparisons*** Below St'd.	Comparisons*** St'd. or Above
Private Vocal	2.60	11.76	0.59	X	
Private Instrumental	3.90	47.06	2.35	X	
Boys' Glee Club	2.90	17.65	0.88	X	
Girls' Glee Club	2.90	70.59	3.53		X
Acappella Choir	3.00	0.0	0.0	X	
Mixed Chorus	4.60	23.53	1.18	X	
Band	4.70	70.59	3.53	X	
Orchestra	4.00	11.76	0.59	X	
Music History	2.70	0.0	0.0	X	
Music Appreciation	2.90	11.76	0.59	X	
Elementary Theory	2.40	11.76	0.59	X	
Sight Singing	2.90	5.88	0.29	X	
Elementary Harmony	2.40	5.88	0.29	X	

Note: The footnotes on Table XIX apply to this table also.

TABLE XXII

RATING OF CURRICULUM OFFERINGS BY THE PANEL FOR SCHOOLS HAVING 200-500 POPULATION

Curriculum Offering	Individual Educators' Rating*					Index Rating**
	5	4	3	2	1	
Private Vocal	1	5	1	1	2	3.20
Private Instrumental	2	4	3	1	0	3.70
Boys' Glee Club	2	1	5	2	0	3.30
Girls' Glee Club	1	2	5	2	0	3.20
Acappella Choir	4	4	1	1	0	4.10
Mixed Chorus	5	5	0	0	0	4.50
Band	8	2	0	0	0	4.80
Orchestra	6	3	1	0	0	4.50
Music History	1	1	5	3	0	3.00
Music Appreciation	2	1	4	2	1	3.10
Elementary Theory	1	0	6	3	0	2.90
Sight Singing	1	4	2	1	2	3.10
Elementary Harmony	1	0	7	1	1	2.90

Note: The footnotes on Table XVIII apply to this table also.

TABLE XXIII

COLLATION OF CURRICULUM OFFERINGS
OF 12 SECONDARY SCHOOLS HAVING ENROLLMENTS OF 200-500
WITH THE RATING INDICES OF THE PANEL

Curriculum Offering	Index Rating*	Percentage of Schools Offering	School Rating (%x5)**	Comparisons*** Below St'd.	Comparisons*** St'd. or Above
Private Vocal	3.20	25.00	1.25	X	
Private Instrumental	3.70	66.67	3.33	X	
Boys' Glee Club	3.30	25.00	1.25	X	
Girls' Glee Club	3.20	58.33	2.92		X
Acappella Choir	4.10	58.33	2.92	X	
Mixed Chorus	4.50	83.33	4.17	X	
Band	4.80	91.67	4.58		X
Orchestra	4.50	33.33	1.67	X	
Music History	3.00	33.33	1.67	X	
Music Appreciation	3.10	25.00	1.25	X	
Elementary Theory	2.90	25.00	1.25	X	
Sight Singing	3.10	25.00	1.25	X	
Elementary Harmony	2.90	33.33	1.67	X	

Note: The footnotes on Table XIX apply to this table also.

TABLE XXIV

RATING OF CURRICULUM OFFERINGS BY THE PANEL
FOR SCHOOLS HAVING ABOVE 500 POPULATION

Curriculum Offering	Individual Educators' Rating*					Index Rating**
	5	4	3	2	1	
Private Vocal	2	2	1	1	2	3.30
Private Instrumental	3	3	3	1	0	3.80
Boys' Glee Club	3	2	4	1	0	3.70
Girls' Glee Club	2	3	4	1	0	3.60
Acappella Choir	6	2	1	1	0	4.30
Mixed Chorus	6	3	1	0	0	4.50
Band	8	2	0	0	0	4.80
Orchestra	8	2	0	0	0	4.80
Music History	0	2	6	2	0	3.00
Music Appreciation	2	3	2	2	1	3.30
Elementary Theory	1	2	4	3	0	3.10
Sight Singing	2	4	2	1	1	3.50
Elementary Harmony	0	3	5	2	0	3.10

Note: The footnotes on Table XVIII apply to this table also.

TABLE XXV

COLLATION OF CURRICULUM OFFERINGS
OF 9 SECONDARY SCHOOLS HAVING ENROLLMENTS OF 500 AND UP
WITH THE RATING INDICES OF THE PANEL

Curriculum Offering	Index Rating*	Percentage of Schools Offering	School Rating (%x5)**	Comparisons*** Below St'd.	Comparisons*** St'd. or Above
Private Vocal	3.30	11.11	0.56	X	
Private Instrumental	3.80	33.33	1.67	X	
Boys' Glee Club	3.70	44.44	2.22	X	
Girls' Glee Club	3.60	55.55	2.78	X	
Acappella Choir	4.30	22.22	1.11	X	
Mixed Chorus	4.50	88.88	4.44		X
Band	4.80	100.00	5.00		X
Orchestra	4.80	55.55	2.78	X	
Music History	3.00	0.0	0.0	X	
Music Appreciation	3.30	11.11	0.56	X	
Elementary Theory	3.10	11.11	0.56	X	
Sight Singing	3.50	0.0	0.0	X	
Elementary Harmony	3.10	0.0	0.0	X	

Note: The footnotes on Table XIX apply to this table also.

Curriculum offerings in schools having 100 or fewer students. A study of table XIX shows that the panel considers four courses to be of great or greatest importance to this group of schools. Table XIX shows that in no case is one of these courses offered by as many as half of the schools. Thus Table XIX reveals a discrepancy between the value placed by the panel members on these courses and the extent to which the schools place value on them by offering them. It seems fair to say that the implications of weak programs suggested earlier are borne out by these findings.

Table XXVI reveals that in this group of schools approximately forty-nine per cent of the enrollment participates in school music activities. Nevertheless, the mean number is quite small. An awareness of the smallness of this number in the further study of Table XIX might account in part for the serious deficiency of the music curriculum for this class of schools. Table XIX further implies the need for a standard, basic curriculum.

Curriculum offerings in schools having from 100 to 200 students. Table XXI shows that the panel required four course offerings for this group of schools, judging by what it considers to be of greatest and great importance. The index ratings of the schools show that not one of these courses approaches the panel standards. The rise of private

TABLE XXVI

PUPIL PARTICIPATION IN MUSIC ACTIVITIES
IN THE FOUR SCHOOL POPULATION CLASSIFICATIONS

School Size	Mean School Population	Mean Number of Students Participating in Music	Percentage of School Population Participating in Music*
0-100	47.24	23.40	49.53
100-200	148.53	49.23	33.14
200-500	331.58	139.00	34.93
Above 500	597.11	153.22	25.66

* The panel established as a standard participation in music by 85% of the school body of any size school.

instrumental and band to a higher status than was evident in the previous classification of schools is encouraging. The number of students participating in music in this and in the previous group of schools, as shown in Table XXVI, suggests that much greater success could be had in these schools by less extensive course offerings, and much more emphasis on a few basic courses.

Curriculum offerings in schools having 200 to 500 students. As shown in Table XXIII, the panel considers five courses to be of greatest or great importance. These schools are able to provide one course which falls in this area. One other course approaches the standards rather closely. The previous tables dealing with this particular group of schools indicate that the conditions in these schools seem to be, in general, more favorable than in the other three sizes of schools. A comparison of both index ratings in Table XXIII seems to verify these conditions. Examination of Table XXVI shows that despite these somewhat less serious conditions, the percentage of students participating in music education is far below the standards required by the panel. This table implies that there is a real need in these schools to develop the musical interests of a far greater number of students.

Curriculum offerings in schools having more than

500 students. A study of Table XXV shows that there are seven courses which are considered of greatest or great importance by the panel. It may be said that these seven courses constitute what the panel believes to be the minimum essential requirements for the curriculum of these schools. The fact that band and chorus offerings in the schools surveyed meet these standards is a favorable indication, but on the other hand the low ratings given by the schools to the other five courses (as indicated by extent of offerings) included in this group implies a probable overstress of the band with resulting sacrifice of the efficacy of the remainder of the music curriculum. The deficiencies of this curriculum are further implied in a consideration of Table XXVI when it is pointed out that only twenty-six per cent of the student body in these schools participates in music education.

General findings for curriculum offerings in all schools studied. A simultaneous treatment of Tables XIX, XXI, XXIII, and XXV shows that girls' glee club ranks consistently high up to the largest sized schools on the basis of offering. This suggests the persistence of the idea that music is for girls only. The band increases rapidly from no importance in the smallest schools to greatest importance in the largest on this same basis of offering. Accountable for this probably is the prominent place of the band in the

athletic activities of larger schools. There is no standard basic curriculum for the entire range of schools. Treatment of Table XXVI in conjunction with these tables indicates that in no instance is the number of students participating in music up to the standard recommended by the panel. This table also implies that in no case does a school have so few students participating in music that the meager music offerings could be excused.

IX. SUMMARY

Thus the questionnaires reveal that except for isolated instances of single school achievement of standards, the groups of schools surveyed do not reach any of the standards set by the panel for items of facilities, equipment, course offerings or music instructors. Although these findings are all of a quantitative nature, they seem in each instance to imply a probable consequent weakness in the quality of the programs of the surveyed schools.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

I. INTRODUCTION

Throughout the development of Chapter III the opinion was expressed that several of the standards required by members of the panel tended to be ideal rather than basically essential as called for. A specific example of this is clear in Table XII of Chapter III, regarding the question of school-owned instruments. A larger panel or a different group of members in the panel might have presented different standards for some or several of the areas treated in Chapter III; yet it is not probable that any other similarly qualified group would offer minimum essential standards which would be close to the figures indicating the status of conditions in the schools.

Also, had there been a complete representation of schools and had the method used to gather the data been a personal investigation of school music programs, the standards of the schools might have been different. For these reasons any comments and recommendations made here are based upon data obtained from reporting schools only.

II. CONCLUSIONS AND RECOMMENDATIONS

Prior to stating the practical nature of this

investigation, the writer was gravely aware of the possibility that because of the technical and material aspects with which this study is concerned, the prime factor, music *per se*, might be obscured by seemingly aimless accumulation of data. The danger of this was made more apparent in letters received from three well-known music educators, in which comments such as the following were made:

> I started to fill out the enclosed questionnaire but gave up part way through because I suddenly realized the futility of this sort of approach.
>
> How, for instance, can one say how many music stands are needed in a school of 200, or a school of 400? It will depend upon the size of the band, and this will depend upon the teacher and dozens of other factors.
>
> Or, is the study of harmony of moderate or great importance? If it is needed by one student it should be taught (No. 5) but for other students it would be evaluated quite differently. . . . Both facilities and equipment should be determined by need and use rather than by an arbitrary "standard".[49]

One must recognize, indeed, that musical needs among communities are necessarily as variable as they are among individuals, yet it is doubtful whether there is any community or any individual who may not gain some benefit from a degree of sensitivity to music and from adherence to some minimum standards for the conditions required to make this sensitivity felt. If this assumption is correct, then it behooves modern education to include instruction in music

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[49] Quoted from a letter received from C. B. Righter, Director, University Bands, State University of Iowa, Iowa City, Iowa.

as a functional part of every school curriculum and to provide the necessary conditions for that instruction.

It follows that the extent of the music program of any school cannot be determined properly by the expressed needs of the community, but rather it must be determined on a basis of the degree to which all youth of the community are being afforded ample opportunity to acquire a genuine sensitivity to music; and whether or not those equipped are provided with conditions necessary for developing some degree of sound musicianship. This immediately calls for a minimum standard basic curriculum. It also calls for minimum essential standards for facilities and equipment needed for carrying on such a curriculum effectively. It is to the task of providing some meaningful standards for facilities, equipment, and curriculum that this work was dedicated. Letters from several well-known music educators upheld the value of such a venture in statements like this:

> Your project is most worthwhile. I would not be afraid to predict that schools in New Mexico will eventually have better equipment and facilities because of your bringing this data to light. I certainly approve of practical work of this type for a thesis.[50]

III. SUMMARY OF CONCLUSIONS

1. Among the four groups of schools surveyed there

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[50] Quoted from a letter received from Clarence E. Sawhill, Director of Bands, University of Southern California, Los Angeles, California.

are many that do not provide an adequate number of facilities for music instruction. There are several schools that do not provide any facilities for music instruction. There are several schools that do not provide any music classrooms at all. Approximately one-third of the entire number of schools does not provide an auditorium. These limited conditions present a music program with an immediate and discouraging problem.

2. The status of equipment appropriate for music instruction is in general inadequate throughout the entire range of schools. In the case of some of the most essential items of equipment such as pianos, phonographs, and instrument storage equipment, conditions are thoroughly unsatisfactory and imply ineffective music programs.

3. There is a general deficiency of band and orchestra instruments in the schools. The conditions are exceedingly poor in the smaller schools, especially. There seems to be a great need for a well organized instrument purchasing plan that will take into account both the factors of balanced instrumentation and economy.

4. The most deplorable conditions are evident in the music libraries of the schools. The scant supplies of teaching materials are inexcusable, particularly in view of the fact that the State Department of Education and other agencies will frequently supply schools with some of these

materials without cost to the school district.

5. In general there seems to be a tendency to employ one or more part-time music instructors rather than full-time instructors. There are several schools that do not employ a music instructor at all. These two facts are the basic cause for inferior music programs.

6. There is little or no uniformity in the music offerings of the schools. There is no apparent adherence to a basic music curriculum, nor is there any evidence of an outline of such a curriculum in the published materials of any public agencies on the state level in New Mexico.

IV. SUMMARY OF RECOMMENDATIONS

1. As a guide to improvement of the condition of music facilities and equipment, Bulletin No. 17 of the Music Educators National Conference is indispensable. It should be carefully studied before the construction of any new school plant, or remodeling project. School administrators, planning groups, and music educators should act upon the results of such study.

2. The board of education, the superintendent, and the principal should be alerted as to what are the most essential items of equipment for music instruction. Through the cooperation of the industrial departments of the schools, the music departments may more easily afford some of

the most necessary equipment. Also these persons should study ways and means of developing public understanding of the music program and its needs and through this understanding win support for obtaining money for the purchase of needed equipment which the school itself cannot make.

3. Every school should purchase all the large and expensive musical instruments required for band and orchestra, and the proper storage equipment necessary to preserve these instruments. All schools should attempt to provide a few of the more popular instruments in order to make them available to students who may not be able to afford them, and also to aid the students in choosing an instrument by furnishing them various instruments for experimentation. The musically minded student should always be encouraged to purchase his own instrument, however. A part of any school's purchasing plan should be indoctrination of the students with respect to the importance of proper care of musical instruments. Since the problem of purchasing instruments for the orchestra and band is such a grave one, schools should use plans such as the one quoted on page 35 for the purchase of instruments. This will insure both economy and balanced instrumentation.

4. Schools should make constant use of the lists of teaching materials for music made available by the New Mexico State Department of Education. A carefully chosen

music library is the core of an adequate and efficiently run music program, and the school should do everything in its power to add to its library.

5. There are several public high schools in this group with such meager enrollments that it would be wasteful to employ a music instructor. In these cases the most suitable arrangement might be the hiring of a teacher with a major or minor in music education, prepared to teach one or two of the academic subjects. This is already the practice in a number of small schools. In the two larger groups of schools every attempt should be made to hire one or more full-time music instructors. The music curriculum required by the panel for these groups of schools seems reasonable, but it would require a minimum of five days a week of full-time instruction for the most satisfactory results.

6. Public school music educators in cooperation with the other members of the faculty and state and local professional organizations should develop and promote the adoption of a state-wide basic music curriculum. The examination of Tables XIX, XXI, XXIII, and XXV showed that none of the groups of schools offered less than ten courses. However, many schools in each group assigned minor significance to the four basic courses recommended by the panel, and at no time did the data support or suggest awareness by any of the schools of the significance of a basic music curriculum or

even a basic set of offerings. This implied that the interests of the students were spread out so widely that effectiveness was diminished in any one course.

V. GENERAL CONCLUSIONS AND RECOMMENDATIONS

Although lack of funds is evident in the budgets of New Mexico high schools, this lack cannot be established as a deficiency that is inevitable or inherent in these schools, and even if it could be established as such, it would not, in the light of general conditions and the best thinking of specialists in the field of public school music, entirely excuse the serious quantitative deficiencies that have been noted.

A music program can be, to some degree, self-supporting although the consensus of experts is that it should never be obligated to be entirely so. Through the proper degree of reliance on well-guided music productions a school may be able to raise some funds which will assist in providing needed music materials, and the musical group will actually profit educationally as well as financially if their degree of reliance is defensible.

To ameliorate the inadequacies of the music programs of these schools primarily requires a dynamic attitude toward the furtherance of music education on the part of every school administration. It also requires that the principal

and the local board of education have a sympathetic understanding of all the needs of an adequate music program. Closely allied with these two things must come effective guidance and generous financial assistance from the New Mexico Department of Education.

The sincere endeavor of these schools to develop adequate music programs will inevitably elicit the interests of the community, and its assistance in maintaining the adequacy of the music program may soon follow.

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APPENDIX

COVERING LETTER FOR QUESTIONNAIRE A

Dear Sir:

I have chosen as the problem of my master's thesis an evaluation of the adequacy of music facilities and equipment that are in use in the high schools of New Mexico. As standards for this evaluation I wish to use the recommendations made by the Music Educators National Conference, the New Mexico State Guide for Junior and Senior High School, Bulletin No. 9, 1950, and also the opinions and ideas of a jury composed of twelve outstanding personalities in the field of public school music. The professors comprising my thesis committee are Dr. Wilson H. Ivins, Professor of Education; Professor Robert E. Dahnert, Head of New Mexico University Bank Instruction; and Dr. Morton J. Keston, Professor of Psychology.

There are innumerable factors that jointly determine the degree of efficacy of a high school music program. Geographical location, community conditions and resources, the number of years the program has been in existence, and the quality and quantity of instruction are only a few of the many basic aspects that demand careful examination before any conclusions about the status of music in any high school can be justified. However, the study of any one of these factors can provide a basis for understanding problems of music programs and indicate need for further improvement. In my case I sincerely believe that the factor of facilities and equipment influences the effectiveness of a music program to an extent that merits serious consideration.

The common problem of overcrowded school facilities and overused equipment is being felt, undoubtedly, by all high school music departments. As a prospective music educator I am interested and sympathetic to these conditions and I hope that, besides fulfilling the requirement for my degree, my thesis will furnish reliable and useful information for the further betterment of music education in the New Mexico high schools.

If you so indicate, the results of this survey will be sent to you.

Thank you.

Yours truly,

Joe A. Salazar

QUESTIONNAIRE A

The nature of this study does not require an individual consideration of any school, and so the identification of your school is unnecessary.

Comments beyond those called for by the following list of questions will be gratefully appreciated. Feel free, then, to make use of the backs of these pages.

I. The following information is essential to the success of this study, therefore, please make your answers as accurate and complete as possible:

A. Please indicate the organization plan for your high school:

6 year _____ 4 year _____ 3 year _____

B. What is the total enrollment of your high school? ___

C. How many students participate directly in music activities or classes? _____

D. How many instructors in your high school teach music?

1. Part time _____ 2. Full time _____

E. What is your current annual budget for the purchase of music instruments and equipment? _____

II. A. Following is a list of courses in music that are taught in high schools throughout the country. Please indicate enrollment in these courses:

1. Private Vocal _____
2. Private Instrumental ___
3. Boys' Glee Club _____
4. Girls' Glee Club _____
5. Acappela Choir _____
6. Mixed Chorus _____
7. Band _____
8. Orchestra _____
9. Music History _____
10. Music Appreciation __
11. Elem. Theory _____
12. Sight Singing _____
13. Elem. Harmony _____
14. Others _____

B. How many students in your high school take part in extra curricular music activities, i.e., civic orchestra, private lessons, church choirs and dance bands? _____

III. A. Following is a list of facilities used in teaching music. Please indicate your situation by placing the correct figure under each heading.

	Number Available	Length	Width	Height
1. Auditorium for performance				
2. Band room				
3. Director's office				
4. General music class room				
5. Music library room				
6. Instrument storage room				
7. Private music practice room				
8. Orchestra room				
9. Others				

B. Following is a list of items of equipment used in the teaching of music. Please indicate the number of items available in your music department and a brief description of the item, i.e., chairs--folding, wood, metal, etc.:

	Number	Description
1. Band uniforms		
2. Blackboards equipped with permanently drawn music staves		
3. Choir robes		
4. Director's stand and podium		
5. Music stands		
6. Phonographs		
7. Pianos		
8. Recording equipment		
9. Risers		
10. Others		

C. Instrument Storage Equipment: Number Description

1. Cabinets _____ _____
2. Roll-away-racks _____ _____
3. Lockers _____ _____
4. Music folder cabinet _____ _____
5. Percussion cabinets _____ _____
6. Shelves _____ _____

IV. Place the number of differently titled compositions available in each of the following libraries of your music department. (List only those scores for which you have an adequate number for choral or instrumental teaching.)

A. SCORE LIBRARIES
   1. Band instruction _____
   2. Orchestral instruction _____
   3. Choral instruction _____

B. RECORD LIBRARIES
   1. Music appreciation _____
   2. Leisure listening, dance, general uses of records _____

C. What is the number of differently titled books in your music reference library? _____

V. Following is a list of band and orchestra instruments. For each kind of instrument indicate the number now used or available for use in your music department. Please list those instruments which are school-owned and those which are student-owned under the appropriate headings.

Instruments Used and Available for Use	School Owned	Student Owned
BRASS		
1. Cornet		
2. Trumpet		
3. Trombone		
4. Alto Horn		
5. French Horn		
6. Baritone Horn		
7. Sousaphone		
8. Mellophone		

Instruments Used and Available for Use	School Owned	Student Owned
BRASS (continued)		
9. Tuba		
a. E flat		
b. Double B flat		
WOODWINDS		
1. Piccolo		
2. Flute		
3. English Horn		
4. Oboe		
5. Clarinet		
a. B flat		
b. A		
c. Alto		
d. Bass		
6. Saxophone		
a. Alto		
b. Tenor		
c. Baritone		
7. Bassoon		
8. Contrabassoon		
STRINGS		
1. Violin		
2. Viola		
3. Cello		
4. Bass Viol		
PERCUSSION		
1. Harp		
2. Cymbals		
3. Glockenspiel		
4. Tympani		
5. Snare Drum		
a. Concert		
b. Parade		
6. Bass Drum		
a. Concert		
b. Parade		
7. Chimes		
OTHER INSTRUMENTS		
_____		
_____		
_____		
_____		

COVERING LETTER FOR QUESTIONNAIRE B

Dear Sir:

As the problem of my master's thesis I have chosen to evaluate the adequacy of music equipment and facilities now used in the music programs of the public high schools of New Mexico. As standards for this evaluation I wish to use the recommendations made by the Music Educators National Conference, the New Mexico State Music Guide for Junior and Senior High School, Bulletin No. 9, 1950, and also the opinions and ideas of a jury composed of twelve outstanding personalities in the field of public school music.

Inasmuch as you are an authority in the field, it would be of immeasurable value to me if I could consider you a member of this jury. In appreciation of the demands on your time, the assistance required is limited to the enclosed set of questions.

There are innumerable factors which determine the efficacy of a music program. Geographic location, community conditions and resources, quality and quantity of instruction, and duration of the program are only a few of these factors that demand careful examination before any justifiable conclusions may be made. However, the consideration of any one of these factors can illuminate problems in the field and may serve as a basis for broader treatment. The subject of facilities and equipment, I believe, influences the effectiveness of music programs to an extent that merits serious study.

This study, if successfully treated, should provide an insight into the general progress of music education in the high schools of New Mexico, and more specifically, it will indicate the progress being made in the development of adequately equipped music departments.

If you so indicate, the results of this survey will be sent to you.

Thank you.

Yours truly,

Joe A. Salazar

QUESTIONNAIRE B

In giving your answer to the following questions, it is hoped that your response will be guided primarily by your wealth of experience in public school music education, by your personal achievements in the field, and by your concept of the purpose and value of music generally.

If you have any opinions or ideas, other than are sought for by the following list of questions, please feel free to express them on the back sides of these pages.

I. What percentage of the students of any single high school would you prefer to participate directly in music classes and activities? _____

II. Write in the number of students that you would consider most effective in the following classes for adequate conditions of learning.

	RANGE OF SCHOOL POPULATION			
Classes	0-100	100-200	200-500	Above 500
Band	_____	_____	_____	_____
Orchestra	_____	_____	_____	_____
Chorus	_____	_____	_____	_____
Elem. Harmony	_____	_____	_____	_____
Elem. Theory	_____	_____	_____	_____
Sight Singing	_____	_____	_____	_____
Others	_____	_____	_____	_____

III. What is the essential minimum number of music instructors for each of the following enrollments:

0-100	100-200	200-500	Above 500
_____	_____	_____	_____

IV. Which of the following five degrees of importance or value in the curriculum of the high school do you attribute to the following:
1. No importance 2. Slight importance 3. Moderate importance 4. Great importance 5. Greatest importance

	SIZE OF SCHOOL			
	0-100	100-200	200-500	500 +
Private Vocal	____	____	____	____
Private Instrumental	____	____	____	____
Chorus				
Boys' Glee Club	____	____	____	____
Girls' Glee Club	____	____	____	____
Acappela Choir	____	____	____	____
Mixed Chorus	____	____	____	____
Instrumental				
Band	____	____	____	____
Orchestra	____	____	____	____
Miscellaneous				
Music History	____	____	____	____
Music Appreciation	____	____	____	____
Elem. Theory	____	____	____	____
Sight Singing	____	____	____	____
Elem. Harmony	____	____	____	____

V. FACILITIES AND EQUIPMENT

Indicate what you believe to be the essential minimum number of facilities and items of equipment for each of the following indicated enrollments:

	SIZE OF SCHOOL			
FACILITIES	0-100	100-200	200-500	500 +
Auditorium for performance groups	____	____	____	____
Classroom especially designed for music instruction	____	____	____	____
EQUIPMENT				
Band uniforms	____	____	____	____
Blackboards equipped with permanently drawn staves	____	____	____	____
Choir robes	____	____	____	____
Music stands	____	____	____	____
Phonographs	____	____	____	____
Pianos	____	____	____	____
Recording equipment	____	____	____	____

VI. LIBRARIES

Place what you consider to be essential to each of the following categories:

(a) different compositions for score libraries

(b) compositions for record libraries

(c) books for music reference libraries

	SIZE OF SCHOOL			
	0-100	100-200	200-500	500 /
SCORE LIBRARIES				
1. Band Instruction	_____	_____	_____	_____
2. Orchestral Instruction	_____	_____	_____	_____
3. Choral Instruction	_____	_____	_____	_____
RECORD LIBRARIES				
1. Music Appreciation	_____	_____	_____	_____
2. Leisure listening, dance, general uses of records	_____	_____	_____	_____
BOOKS				
1. Reference	_____	_____	_____	_____
2. Others	_____	_____	_____	_____

VII. A. The following is a list of band and orchestra instruments. Write the essential minimum number of each instrument needed for an adequate program for each of the enrollment categories given.

B. In the list of instruments check with the letter "S" any special ones that you think should be provided by the school system.

	SIZE OF SCHOOL			
	0-100	100-200	200-500	500 +
BRASS				
1. Cornet				
2. Trumpet				
3. Trombone				
4. Alto Horn				
5. French Horn				
6. Baritone Horn				
7. Sousaphone				
8. Mellophone				
9. Tuba				
a. E flat				
b. Double B flat				
WOODWINDS				
1. Piccolo				
2. Flute				
3. English Horn				
4. Oboe				
5. Clarinet				
a. B flat				
b. A				
c. Alto				
d. Bass				
6. Saxophone				
a. Alto				
b. Tenor				
c. Baritone				
7. Bassoon				
8. Contrabassoon				
STRINGS				
1. Violin				
2. Viola				
3. Cello				
4. Bass Viol				
PERCUSSION				
1. Harp				
2. Cymbals				
3. Glockenspiel				
4. Tympani				
5. Snare Drum				
a. Concert				
b. Parade				
6. Bass Drum				
a. Concert				
b. Parade				
7. Chimes				
OTHER INSTRUMENTS				

MEMBERS OF THE PANEL
WHO COMPLETED QUESTIONNAIRE B

Beeler, Walter Roy: Associate Professor of Music and Director of Bands at Ithaca College

Christiansen, Olaf: Professor of Music at St. Olaf College

Dahnert, Robert E.: Assistant Professor of Music at The University of New Mexico

Denton, Floyd C.: Director of operettas and chorus, Assistant Conductor of Phoenix Symphony Orchestra

Dvorak, Raymond Francis: Professor of Music at The University of Wisconsin

Echols, Leonard William: Sales Manager of C. G. Conn Instrument Company

Prescott, Gerald R.: Assistant Professor of Music at The University of Minnesota

Rohner, Traugott: Associate Professor of Music, Northwestern University

Ward, Arthur E.: Director of Music Education, Public Schools, Montclair, New Jersey.

Yoder, Paul: Chicago Music Publishing Company

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