A CLASS METHOD FOR TEACHING VIOLONCELLO
TO MEET INDIVIDUAL DIFFERENCES AMONG STUDENTS

by

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CHAPTER I

INTRODUCTION

a. Statement of the Problem

The problem involved in this study will be to construct a class method for learning to play the violoncello which will provide for adequate attainment and meet individual differences found among students.

b. Method of Research

The first portion of the thesis will be concerned with the problem of establishing the need for providing for individual differences in the class teaching of like instruments— in this case the violoncello. To establish this, a survey of literature pertinent to all phases of the problem will be attempted.

In the next major part of the thesis, six currently accepted beginning cello methods will be analyzed to determine first, the approach; second, the sequence of technical problems; third, the scope or range of the material presented; and lastly, the rate of progress.

From this analysis, the writer hopes to find a standard pattern to aid in constructing the method that will be formed in Chapter III. Procedures which appear most
frequently throughout the six methods will be used by the 
writer in preparing the cello method to meet the needs of 
in individual differences among students. If attempts have 
been made by the various authors to meet individual dif­
ferences, the attempts will be evaluated in terms of ac­
cepted procedures for meeting individual differences among 
students. The musical material will consist of simple 
melodies arranged for three levels of ability.

Three of the methods to be analyzed will be methods 
designed specifically for class instruction in hetero­
genous string groups. The other three to be chosen will 
be designed for private instruction or possibly for cello 
class. The differences in techniques will be noted.

c. Organization of the Report

The first chapter, of which this is a part, is purely 
introductory, presenting the problem and the method of its 
treatment.

In Chapter II will be found evidence supporting the 
need for the study. Included will be discussions, on the 
basis of available literature, of class instruction for 
learning musical instruments, of the advantages of class 
instruction for similar instruments, of the need for pro­
viding for individual differences in education, and spe­
cifically the method of teaching of like instruments.
In Chapter III will be found a review of the psychology and philosophy of class instruction, as accepted by leading authorities, and an analysis of the six cello methods. Chapter IV will be, in itself, a complete beginning cello method to meet the needs of individual differences among students. In Chapter V will be found the summary and recommendations. The thesis will be completed with a bibliography.

d. Limitations of the Problem

The method to be constructed will be for use in teaching beginning students and will span the first six weeks of instruction. Thirty lessons (one a day for six weeks) will be divided unequally among four general sections. Each section will contain enough lessons to meet the needs of that particular phase of learning to play the cello. A detailed description of this procedure and the reasoning pertaining to each problem will be included in the introduction of the method proper.
CHAPTER II

NEED FOR THE STUDY

Before the writer can objectively formulate a method for teaching the violoncello, he must first establish a need for such a method. This will be done by a comprehensive review of the literature pertinent to the study as follows:

1. Establish the need for class instruction in instrumental teaching.
2. Establish the need for class instruction on like instruments.
3. Establish the need for providing for individual differences among students.
4. How to provide for individual differences.
5. Establish the need for providing for individual differences in the teaching of musical instruments.
6. Establish the need for providing for individual differences when teaching the cello in groups.

a. The Need for Class Instruction in Instrumental Teaching

Music educators have been of the opinion that private instruction at all levels of learning is the most adequate
method of teaching. For those students past the usual level of accomplishment this is undoubtedly true. Dealing with the problems of advanced technique and interpretation are best handled privately.

There is no refuting the fact that for the advanced student private instruction is practically the only type of instruction that has up to the present time developed both technical skill of the first rank and a high degree of artistry.¹

However, from a beginner's point of view class instruction is in some respects much more ideal as a learning vehicle.

Peter Dykema and Karl Gehrkens in their book "High School Music" make the following statement from the standpoint of aesthetics:

The significance of beauty as a driving force with all people, the recognition that the arts have appeared at all times because they represent a significant part of complete living, and the consciousness that a strong music program in any institution is of value for all those who come in contact, has brought about the desire to extend the benefits of music to all children.²

J. E. Maddy and T. P. Giddings speak from a standpoint of economy and general efficiency:

Class instruction has been adopted as the most efficient and economical way to teach all academic subjects. It has been applied in music teaching,


however, and during recent years has proved to be the most efficient and economical way to teach all branches of music.¹

However, aside from the idea of reaching as many students as inexpensively as possible, class instruction has other values that are more important psychologically. The inference, of course, is toward the very desirable qualities made manifest in the social situation presented. These points are covered quite adequately in Theodore Norman's book "Instrumental Music in the Public Schools." In this book five reasons are discussed; the first supports the viewpoint stated above.

1. It opens the way to all children to discover their talent and interest in music by offering instruction at little or no cost. Thousands of students who otherwise would be barred from any serious study of the orchestral instruments, due to the high cost of private study, have been afforded the joy of a new experience in music making. New talents have been discovered which otherwise might have been forever hidden.

The second reason is correlated to group responsibility and the wholesome gregarious tendency to pull your proportionate weight in a group.

2. Class instruction socializes the music lesson by encouraging cooperation, self-reliance, and good sportsmanship. From the first lesson, the student is impressed with the need of harmonious working relation if the class is to function in the

¹ Maddy, J. E. and Giddings, T. P., Instrumental Class Teaching (The Wells Music Co., 1926), p. 4.
most efficient manner. He learns to stand on his own feet, to contribute to the development of the group, to assume his share of the responsibility for the progress of the class. Under this plan, the student is constantly performing before his fellows alone and in concert, thereby developing a poise and self-control which will stand him in good stead in his relationships with other people.

In his next reason Mr. Norman points out the stimulating effect of explaining and solving problems with others. The assumption is that a shared problem is easier to learn.

3. The mortality rate is lower because of the increased opportunities to stimulate and maintain interest. Few of us, in our youth, would have enjoyed practicing alone the various skills associated with baseball, football, or basketball. The joy of the game lay in playing with others, matching skills, improving our game in company with our fellows. This is also true in learning to play an instrument. The pleasure is vastly greater when we learn with others.

Point four is more important from a strictly musical viewpoint. The group offers ensemble possibilities which lends itself in turn to sight reading and better ear training.

4. Class teaching permits and encourages a rich and extensive musicianship by correlating previous music study in the school room with ear-training design, sight-reading, ensemble-playing, and the like. In the best types of group instruction, definite efforts are made to link the child's previous musical experience with his study of instruments. Sight reading and ensemble playing, phases of musicianship often neglected under the plan of individual instruction, lend themselves readily to the group method of teaching. The common musical problems such as phrasing, true intonation, balance of tone, and tone quality,
become more real because they are solved and mastered in a group which has a significant social relationship to the student.

The instructor also benefits from the class group. In the capacity of "feeder groups" the classes help the instructor to maintain symphonic proportions in the more advanced groups.

5. Class instruction enables the director to develop and maintain a symphonic instrumentation in the large school groups. From the class group the director can choose according to the needs of his organization. He is in a more favorable position to encourage the study of those instruments which he requires and to direct youthful energies away from such instruments as are not needed.1

b. The Need for Class Instruction on Like Instruments

In the opinion of most music educators, more can be accomplished in the instrumental class if the class is made up of beginners on like instruments. Of course, in very small schools where the number of pupils is limited, the plan would be impractical, but in the average large school the plan has proven to be most adequate.

The following statement is found in the Music Education Source Book of 1949:

There are advantages in having the single instrument class. Students will have common problems; there will be more teaching done concerning the instrument student.

Mr. Norman ("Instrumental Music in the Public Schools") has much the same point of view.

This plan of instruction has unquestionably proved itself to be practicable. Because of the similarity of problems involved, students are able to progress more rapidly in solving the particular technical problems of their instruments. Especially in the case of the more advanced student, this type of instruction has a decided advantage over succeeding plans as it enables the instructor to meet more effectively the increased number of differences which develop with greater instrumental skill.

\[ \text{c. The Need for Allowing for Individual Differences in Education} \]

Granting that class instruction is the most adequate method for attaining educational goals in our public school systems, we now turn to the problem of individual differences.

We are all different both biologically and intellectually. Body growth and mental growth assume different

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characteristics in all of us.

We are not concerned with "why individual differences" in these next two sections, but rather a little about it and the need for providing for it.

James L. Mursell has this to say concerning education today and individual differences:

School standards are usually organized in terms of average achievement. A line or level is established which seems feasible for the average of the group. The problem of the teacher then becomes to bring everyone up to the average, if possible; and the problem of the pupil is to conform. Instantly, the individual becomes a difficulty, unless, of course, he happens to be close to the line. This is true whether he rises above the average or falls below it. It is quite enough to warn us of a very grave error, for the individual and his progress, rather than the average, are the crux of education. Standards so conceived and administered most certainly do not function as inspiring ideals. They are only mass conveniences.¹

Walter W. Cook asserts that in each class there is a range of achievement and intellect of from four to eight years, but with this knowledge the teacher is still only a grade specialist in most instances.

Many of the false assumptions which inhibit teachers in meeting the needs of individual pupils are corollaries of the idea that grade levels signify rather definite stages of achievement. Despite the fact that in the elementary school the typical range of intelligence and achievement in a grade is from four to eight or more years, the teacher is commonly assumed to be a grade specialist

¹. Mursell, James L., Human Values in Music Education (Silver Burdett Co., 1934), p. 84.
with specific knowledge and techniques appropriate to a given grade and hence, should not be expected to teach pupils who deviate markedly from that level.

It is furthermore assumed that the course of study for a grade is the scheduled academic requirement to be administered uniformly to all pupils in the grade, that all pupils should be capable of coping successfully with the work outlined for the grade.

If grade specialization were considered less important, the teacher would remain with the pupils for several years.\(^1\)

William Clark Trow has essentially the same viewpoint.

An important factor that makes the adaptation of instruction to individual differences difficult lies in the irregularities of human growth, and this applies not only at the beginning but all along the line. Children differ in their rates of growth. Some are slower growers, physiologically and mentally; others grow more rapidly. Some show spurts and some do not. The older view that children do or should conform to the grade classification and that a grade is composed of pupils of the same general level of ability, is slow to die. The reason may be that when it is given up, the administrator and the teacher face the children differing as much as four or five grades . . . are to be taught together in the same room, each on his own level with suitable books and other materials made available.\(^2\)

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In the 1951 edition of the State General Music Guide, the authors in defining "developmental psychology" bring to light the problem in relation to music.

The developmental approach is concerned with the understanding of the growth of the child. Children differ from each other and should not be expected to attain the same accomplishments at the same time. When children are taught in groups, a differentiated technique must be employed. Some children may then enter into the more simple aspects of the musical activity while others with more development may perform more complicated tasks.

d. How to Provide for Individual Differences

In spite of the fact that those affiliated with public school education recognize this problem, progress toward correction has been extremely slow, the reason being that the very nature of the problem, and correction, is demanding of great versatility and knowledge on the part of both the administrator and the teacher. How to provide adequately is a problem of recognition plus extreme sensitivity and understanding.

Walter W. Cook in "Educational Measurement" offers two possible solutions—the first pertinent to what is commonly called ability grouping and the second to

heterogeneous grouping.

Solving the problem of individual differences in the schools takes two general forms:

1) The first assumes that instructional groups can be made relatively homogeneous with respect to general ability, and then subject to standardized educational methods using uniform textbooks, assignments, recitations, and examinations adjusted to the level of achievement.

2) The second approach assumes that heterogeneity resulting from both trait differences within the individual and variation between individuals is so great that traditional mass instructional procedures must be discarded in favor of techniques designed to meet individual needs. The goal here is to know and accept the great variability of instructional groups as it exists, then to provide effective methods of providing for individual needs and capacities in such heterogeneous groups. The idea being that each child works at his own rate.¹

Of the above two systems, heterogeneous grouping seems somewhat the more practical, due to the fact that individual differences would still arise in the various ability groups. Also, in heterogeneous grouping the accent is considerably more on the individual and his problems. William Trow in "Education Psychology" believes in heterogeneous grouping with a system of "handicapping" being used.

Considering that it is advantageous for children of different intelligence levels to mingle, arrangements need to be made so that they will have different tasks in harmony with their different

abilities without forcing them to compete intellectually. There is nothing undemocratic about a handicap tournament in golf, tennis, or track; no more is there in putting pupils into intellectual situations in which they have a reasonable chance to succeed.1

e. A Need for Providing for Individual Differences in the Teaching of Musical Instruments

On the basis of the foregoing statements, it is easy to observe that there is urgent need for practical application of what is known to solve the problem of differences among pupils.

Clara McCauley in her book "Professionalized Study of Public School Music" has broken the classroom music lesson down into three general classifications of students:

1. Those with no special talent but who are interested in singing and hearing music.

2. Those who have some musical ability and can learn to read music and sing the different parts in harmony.

3. Those with considerable musical talent and are, therefore, interested in studying music more intensively.2


The same general idea is applicable to the instrumental class. These classes are not made up of category number three exclusively. Students do wish to learn to play who will, of course, never really play well, but who, nevertheless, feel a need to express themselves musically. Actually this group constitutes the bulk of our music classes. It is this same group which will eventually make up the major part of community instrumental groups.

f. The Need for Providing for Individual Differences When Teaching the Cello in Groups

Thus far we have covered the advisability of providing for individual differences in the learning of musical instruments, and the advisability of restricting classes to like instruments.

The logical plan would be to have for each instrumental class (like instruments, of course) a method which in each lesson is designed to handle individual differences.

It has been a precedent in string teaching to teach violins, violas, cellos, and basses, in a single group. It is evident that a method which would provide for individual differences would be impractical for a heterogeneous grouping of all of the string instruments due to
sheer bulk and complexity.

Therefore, it would be necessary to divide the group into individual classes with a graded method for each instrument. To reiterate, the purpose of this thesis is to provide just such a method for cello.

Summary

In reference to the beginning of this chapter, we established the need for class instruction in the teaching of musical instruments. It is reasonable to assume that the range of ability will be as great in an instrumental class as in a reading class. Besides developing a knowledge of the principles of music, the student must also learn a skill; one requiring muscular coordination of the body. This alone would be reason enough to assume that individual differences are existent. Administrators, and teachers, to a great extent, recognize the need for providing for the individual. They attempt to create situations to allow for these differences in practically all forms of academic endeavor—even classroom vocal music. Why not in instrumental music? Research in this particular problem has disclosed that the field is practically unexploited. All violin players do not plan to be a Heifitz any more than all mathematicians plan to be an Einstein. As long as music is so universal, including literally
millions of participants who play just for the joy of playing, why do we not let them learn at their own rate of progress? Certainly no one standard of instrumental achievement is suitable for all pupils, nor even all pupils of the same grade.
CHAPTER III

DEVELOPMENT OF CRITERIA TO BE USED

AS A BASIS FOR A CELLO METHOD

The object of this chapter was to establish criteria that would be used as a basis for the cello method itself. The first portion of the chapter was devoted to a review of the philosophy and psychology of class instruction as accepted by leading authorities. Their views and techniques will be observed in the construction of the method.

The latter part of the chapter was concerned with a critical analysis of cello methods now in practice. Six currently accepted methods were compared and analyzed in view of their approach, sequence, scope, and rate of progress. The procedures found common in the methods will also be followed in the construction of the method.

a. Philosophy

In a broad sense, one of the principal objectives of Music Education is to precipitate adequate musical growth. If this growth is to occur it is obvious that the substance of a program in Music Education should consist of developmental experiences in music, deliberately designed
to bring about musical growth. The personal value of this growth is, for most children, not made manifest in the complete mastery of musical motor skills, but rather in a more subjective aesthetic sense.

Nothing can be more futile than to teach music as a sort of routine in the vague hope that compelling aesthetic experiences will follow.¹

Dykema and Gehrkens have this to say concerning the end result of school music in most instances:

At the last it is the ideals and attitudes that best survive the ravages of time . . . Skill in playing violin or oboe may be lost; but an ideal of good tone, of perfect intonation, and an attitude of love and enthusiasm for fine music--these will endure as long as life itself.²

Only a small percentage of school musicians carry their music beyond graduation. A sound philosophy of education, then, would be one that aimed at those subjective elements mentioned by Dykema and Gehrkens. For those who wish to take up music seriously, nothing would be lost in building from such a foundation. Indeed, much would be gained.

The problem to be faced in constructing an instrumental method, with the above idea in mind, will be


technique through aesthetics or skill without drill. The emphasis then is always on the music.

James T. Mursell has this to say concerning the "misplaced emphasis."

So in Music Education there is often an emphasis upon notational symbols and a neglect of tonal design, an emphasis upon facility in technique and a neglect of musical and expressive values, an emphasis on the right notes and a neglect of the tonal pattern which makes their rightness significant, an emphasis on theoretical rules and a neglect of the direct tonal perception and imagery to which the rules refer.¹

The contrasts that Mr. Mursell is making might better be labeled "mechanistic" and its antithesis "functional."

To further clarify the functional aspect, Mr. Mursell says:

In anything we are trying to teach we should pick-out and emphasize the inner, living essence in the first place, rather than the external manifestations. . . . Every merely routine lesson, every languid and indifferent activity, every undertaking without any grip or drive about it is a dead spot, and to that extent a failure.²

Building techniques of class instruction to follow these experiences is then, in a broad sense, the problem of this thesis. Mursell states:

If one wants pupils to become able to play the violin, give them the promptest possible experience of making music on the violin, even if it is only with the open G string.³

² Ibid., p. 4.
³ Ibid., p. 112.
In other words the student confronted with actual music will want to play. There will be a "felt need."

The concept of "felt need" aroused by curiosity about heard music is basic, and will revolutionize teaching procedures from the lowest to the highest level.¹

Mursell, being concerned with this principle has listed three considerations that should be used as a guide in the mastery of the various musical techniques.

a. Every skill, mental or motor should be learned for the sake of its expressive use. Its educational value resides precisely in its use, rather than in its acquisition or possession. What it means is that we must be concerned to provide organized opportunities to use the skills that we teach. The acquisition of any element of technique should be a conscious, immediate increase on the part of the learner in command of the resources of musical expression and enjoyment.

b. All technical skills are acquired best and most rapidly in connection with musical problems and not through schemes of formal drill.

c. The teaching of the various techniques should be associated closely with growth in musical insight.²

In using the principles spoken of in the preceding pages the question arises as to just what objective steps


are to be taken at the onset. Instrumental music teachers should make use of the idea of using familiar music as a means of understanding music and music notation.

Experience is the only tool with which we can interpret anything.¹

The use of this technique would be valuable in helping the pupils to bridge the gap from the known sound of familiar melodies to the unknown printed symbols which are represented in the new melodies. The principle is that rudiments of fingering, pulse, rhythm, and notation may and should be taught through the medium of a familiar song.

b. **Analysis of Cello Methods**

The six currently popular beginning cello methods chosen for analysis are listed on the chart below. For the sake of convenience the methods have each been designated a letter of the alphabet. When the methods are referred to, their letter will be used.

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CHART


The first three methods mentioned above were written for cello and are designed primarily for use by the private student.

The others are planned for use in the mixed string class comprising the violin, viola, cello and bass. The writer selected the two types of string methods to get a comparison of differences, if any, between the class and the private approach.

To establish the criteria necessary to formulate an adequate method for teaching the cello, the six methods will be critically compared and analyzed according to these four points:

1. Approach
   a. Open string or simple approach
   b. Song or melodic approach
   c. Technical approach
   d. Combination of any of the above

2. Sequence of Technical Problems

3. Scope of Material

4. Rate of Progress
1. **Approach.** The methods without exception began with the simple or open string approach. Lesson one in every instance began with a down bow on an open string, the string being either the A or the D string.

However, methods C and D used a fast whole bow on quarter notes while the other methods used a slower bow on the longer note values.

The approach found in the six methods from this point differed considerably. Methods A and B were primarily logical in their concept of technical problems. In other words, the sequence of technical problems was dealt with in series of exercises, arpeggios, unknown melodies, and scales. Method A was by far the more technical of the two. An analysis of the method revealed no familiar melodies. Method B, although principally technical, had melodies and familiar songs throughout that illustrated the technical problems presented in the preceding exercises.

Methods C and D had a fairly even distribution of technical and melodic material. In both of these methods were found sections of technical material followed by a series of songs and melodies. The other two methods, E and F, were almost entirely melodic. The problems were introduced through melodies with an emphasis on the melodic structure of the song to give technical
experiences to the pupil.

From the information gathered from the study of the six methods analyzed, one conclusion can be formulated. The methods used for individual instruction use the technical approach considerably more than those assigned for class instruction. Two of the individual methods were technical and one was a combination method. The class method books were just the opposite—two of the class methods used the melodic approach while one used a combination of melodic and technical approaches.

2. Sequence of Technical Problems. In the preceding discussion it was stated that each method started with a whole bow at various speeds, on one of two open strings. From this point on, through the introduction of first position, all the methods except method A followed the same specific pattern. The pattern was fundamentally this: bowing was introduced on all of the open strings; the open strings were then used exclusively, until certain basic rhythmic patterns had been well learned; these patterns were composed of whole notes, half notes, dotted half notes, quarter notes, and then corresponding rests.

When rhythms and rhythm patterns had been mastered, the use of the left hand was introduced. By this time bowing, in most cases, should be fairly accurate. First
position was introduced fairly rapidly on all strings using all of the rhythms that have been introduced. Several pages were then devoted to practice and review of what had been presented, with the idea that the student would not play with ease in the first position while bowing and reading the fundamental notes and rests.

Method A was quite different. On page one, the notes of the first position were introduced in whole and half notes. Then the other note values were added as the student was becoming at ease in first position. Of course, the bow was being used all the while. In this book all problems occurred in rapid succession. Because of the rate of speed and the fact that many new skills were being used simultaneously, one would conclude that the method would meet adequately the needs of the better students.

The next new problem to be analyzed in every method was the tie. This constituted the beginning of more advanced bowing technique in that the one bow was used for more than one note. From the two note tie the methods progressed logically to the two note slur.

We are, at this point, about midway through each method and in five of the six methods the sequence has fundamentally been the same. It would appear that some standardization had taken place.
However, something additional should be said concerning the work in first position in methods A and G. In these two, a great deal of time was given to melodies and exercises that dealt with intervals; materials which dealt with training the ear to hear the intervals, the second, the third, the minor third, and the perfect fourth. The other methods did not place such an emphasis on intervals.

At this point, however, the methods became quite individual. Method C ceased to introduce any new technical problem whatsoever. The rest of the book was devoted to merely becoming sound in the fundamentals already learned.

Methods E and F were somewhat alike, their particular sequence being that second position was introduced. This, however, in both methods was little more than an introduction, but seemed more of an exploration. The eighth note, the dotted quarter note, and their corresponding rests were covered, followed by an introduction to the extended first position. Method F was somewhat more complete because pizzicato and detached bowing were introduced.

Methods B and D were also somewhat parallel. In these particular books the following problems were met: the eighth note, the dotted quarter, the corresponding rests, six-eight time, pizzicato, extended first position and
then fourth position, instead of second position as introduced in the two methods just previously discussed. Method B was somewhat more complete; half position and the playing of harmonics were taught. Also, this book dealt with each specific problem at considerable length.

Method A was again somewhat in a category of its own due to its thoroughness. The new rhythmic problems were introduced in about the same sequence as in the methods above. Half position, extended first position, and double stops were also introduced. Second, third, or fourth positions were, however, not presented at all. The distinctive qualities of this method will best be discussed on page 31 of this chapter.

3. Scope of Material. Nothing too general can be said about the particular scope of the six methods examined. Certain books were concerned with a great many more technical problems than others. The scope of each has been in part determined in the preceding section.

Method B was the most inclusive. Practically all rhythmic problems, first and fourth positions, harmonics, half position, and extended positions, slurring, pizzicato, bowing, etc., were presented. Another private method, method C, contained the least number of items. The last pages were still extremely basic. The other methods fall somewhere in between the two extremes. Actually, if
method D presented second position instead of fourth, it would be similar in scope to E and F.

Aside from staying in first position, the scope of method A was much the same as the three just mentioned, D, E, and F.

4. Rate of Progress. Method A was found to proceed rapidly at the beginning but proceeds with painstaking details. First of all, it had more pages of written material than the others. The scope of new problems was not consistent with the length. At the beginning, the problems were presented rapidly, then the method became the most thorough of them all. All the problems were attacked in a highly technical manner, often in two parts. The student played one part and the teacher played a more difficult duet part, making use of major scales, arpeggios, chord studies, interval studies, wrist drills, speed drills, double stops, leaps over strings, eight notes to the bow, and, finally, minor scales.

The rate of progress in the A method was extremely rapid due to the extremely narrow scope and the somewhat non-technical nature of the material. The book would, perhaps, not stimulate a good student.

The three methods which were average in scope also were average in rate of progress. A wide variety of problems was included and adequate material was devoted to
each problem to insure understanding.

Book B moved rapidly over an unusually wide scope of problems. For the serious student, the book would be excellent.

Summary

In five of the six methods evaluated, the sequence and manner of presentation of the various technical problems through the first position were fundamentally the same. The other method, method A, was not, in itself, a drastic departure; the difference, in regards to sequence, was actually one of telescoping the various problems together in an effort, seemingly, to accelerate progress. Students of better than average ability could handle this method quite well. Method A was copyrighted in 1917, thus, perhaps, being the reason for the technical approach used.

In general, the methods followed this pattern: first, the bowing techniques were learned; then, the rudimentary rhythms and rhythmic patterns were studied and made applicable to bowing and bow speeds. When the bowing and the reading knowledge of the rhythms were mastered to the degree of becoming semi-automatic, the left hand was introduced. Slow rhythms were used so that proper placement of fingers and proper hearing could be insured. The last problem, before going on to the more advanced finger positions of
the left hand, was again one of bowing. Two, three, and four notes to a bow were learned through first studying the tie, then going on to the two-note slur, etc.

The method to be written on the basis of this evaluation is a beginning method and being so, will include first position and slurring. The sequence of problems of this method will parallel the methods evaluated.

The approach will be melodic and will be in the singing experience of the pupil inasmuch as the method will be designed for class work. The evaluated methods that were melodic in approach did not specifically make use of the song material that would be within the child's experiences. Many of the melodies were written by the authors to fit the problem at hand. Other songs were obscure and unfamiliar on the whole.

The class methods evaluated were all melodic in approach. One of the methods designed to accommodate private instruction was also melodic.

The melodic approach, in way of re-defining, is an approach that meets specific problems through melodies. The technical approach uses technical studies and drills to meet the problems.
CHAPTER IV

A CLASS METHOD FOR TEACHING VIOLONCELLO
TO MEET INDIVIDUAL DIFFERENCES AMONG STUDENTS

a. Introduction

The instructional material is based on the criteria arrived at by the analysis of the Cello Methods and the recognized need for providing for individual differences. Providing for individual differences in the music will be done thusly: the music will be divided into three parts and will be written on three separate staves. The top or A staff will be the most elaborate and present technical problems most rapidly. This line is, of course, for those progressing at a faster rate of speed. The music of the middle or B staff will not be as technically involved as the top line. The bottom line is geared to slow learners, open strings and small leaps will be the extent of the technicality.

The method is not meant to be competitive in the sense that everyone works to play the top line. Quite the contrary, everyone merely works at his own particular rate of speed. It is advisable to switch parts frequently if it is at all possible. Everyone should have the ear training
that is afforded from the playing of outside and inside parts. In this sense the method is almost harmonic.

b. Sequence of Problems

The sequence of technical problems in this method will not be exactly the same as the sequence dictated by the majority of the analyzed methods. The reason for this is simply that this method follows an organismic point of view while the analyzed methods were more mechanistic in approach. The open string exercises in bowing that were common to all of these methods were not in the previous musical experiences of the students and were meaningful only as technical exercises. From the developmental point of view, the familiar music has to be brought immediately into the playing capacity of the children. Therefore, the first problem will be one of finding pitch. The right hand will then, temporarily, merely pluck the string.

We are assuming that the students are beginning this study with no instrumental background whatsoever. The students will, in the general music class, have gained a basic orientation upon which may be taught the basic fundamentals of music such as note and rest values, key signatures, and time signatures.

The first problem will be the beginning steps to playing in first position. The left hand will stop the
string for the tune and the right hand will pluck the string in what is known as pizzicato. To explain why the writer is beginning the method in this manner may best be done by reviewing the physical and mental exigencies of playing the instrument. The ideas presented here are those of the author and not those represented in the various methods studied.

The playing of a stringed instrument involves a great deal of muscular coordination. Each arm is doing something totally different from the other. The right arm for instance employs the use of all three hinges, the shoulder, the elbow and the wrist all swinging in a loose but highly regulated and independent manner. The fingers of that hand are trained to balance (not hold) a bow as it is drawn in a straight line across the strings. Learning to use this arm properly takes concentration, practice, and training the muscles.

The left hand is the one responsible for finding the correct pitch. Correct position for finding the notes must be learned. Then the muscles and the ear must be trained simultaneously to allow the student to get from string to string and note to note with some dexterity while finding the correct pitch of the notes. Each finger has to be trained to work independently of the others.

It would be folly to throw all of these skills at a
student at the beginning. Therefore, one skill will be learned at a time; then, when the student is becoming somewhat at home with each, they will be combined.

The description of the sequence of problems up to this point has been done in a highly objective manner, which would perhaps lead one into thinking that the music itself is highly objective and mechanistic.

All these problems already mentioned and those to be mentioned are met through a melodic approach. From the very first page the student will be playing familiar songs. The problems will be met in melodies that have been within the singing experience of the students. The songs will be chosen with discretion. Songs will be chosen in which can be met the technical problems in their logical sequence.

To remain consistent with the viewpoint of introducing the new major problems without the encumbrances of the other skills, first position will be introduced without bow. The right hand will merely pluck the string.

The initial steps will be confined to the D string—the right hand will pluck and the left will stop the string in position. When the feeling of proper hand position in first position has become somewhat automatic, the knowledge will be transferred to the other strings in this order: The G (the third) string, the A (the first) string, and finally the C (the fourth) string. The sequence of strings
is the same as the sequence followed generally in learning bowing and is done that way for exactly the same reason, namely, the D string is physically the easiest to work with and the C the most difficult.

As the lessons progress and as the student becomes more adept at finding the notes in first position, the more complex rhythm patterns will be studied. Some of these patterns will be played on open strings with the bow being used.

When the problems and combinations of problems mentioned above have been studied, the bow is then put to use as the left hand is finding the pitch of the notes of the music. The student will use one entire bow for each note with an emphasis on tone. If these fundamental reading, bowing and hearing problems can be mastered simultaneously, the learner has completed the first steps towards becoming a cellist.

The next problem will be one of bowing. Up to this point all of the bowing has been one long bow per note regardless of the time value of that particular note. Besides the problems of keeping a straight bow midway between the fingerboard and the bridge, bowing on the correct string, and proper hand position, the only real problem is judging the speed of the bow to allow for the note values.
The problem will be actually one of learning to play two or more notes per bow. To begin with, the students will learn to play a "tie"—two quarter notes tied together to give the time value of a half note. Then the quarter notes will be disposed on different pitches making it necessary to change fingers at mid-bow. Following will be the problem of crossing strings on a two note slur, followed in turn by the adaptation of slurring to the various known rhythms.

Lastly, will be the adaptation of bowing speeds to accommodate three and four notes per bow.

At the end of the method will be a series of songs under the caption of "Supplementary Material." An effort has been made to summarize and bring into practice what has preceded. The technical nature of the music will be somewhat advanced.

c. Method of Treatment

The method is designed to carry through the first six weeks of learning to play the cello. There will be Thirty lessons in the methods, each lesson to be played on succeeding days. By way of explanation this is the procedure that is to be followed: all playing is to be done at school and all playing is to be supervised. The student will not practice at home; when beginning students play alone, many
bad habits are formed.

Over the six weeks period the students will meet every day. Each lesson will span between thirty and forty minutes. Actually the first few lessons could be covered in twenty minutes and wisely so due to the element of muscular fatigue made manifest by the unnatural positions of arms and body. Each lesson will be graduated into the succeeding lesson with enough of a graduation apparent so that the student will be able to see and understand his day by day progress.

The thirty lessons will be broken down into four sections of varying length. Each section will deal with a certain set of related problems and the length of the section will, in turn, depend on the scope of the problem.

The sections are as follows:

I. Using the left hand - right hand pizzicato.
II. Using the left hand while bowing.
III. The tie and the slur.
IV. Supplementary material.

Procedure for Teaching.—In a broad sense every instrumental method written may be taught functionally or mechanistically, depending on the beliefs and philosophy of the instructor. This method is being designed as a functional developmental approach and if the following procedures are followed a developmental response will take
place. The philosophy behind these procedures can perhaps be best summed up in this statement: To create interest, documentation, sensitivity, and enjoyment, procedures should be employed which allow the learner to relate music to his own experiences. Procedures should be employed which utilize his powers of discovery, and which lead the child to acquire skills and knowledge which clarify his need, his interest, his knowledge, and thereby contribute to his overall development.

**Procedures**

1. Recall. Play the song on the piano.
2. Sing. Have the students sing the song (with piano if possible).
3. Relate. Relate the song to pertinent topics—geography, history, seasons, holidays, etc.
4. Interpret. Have students note mood, phrases, melodic line, meter and duration pattern that is essential to the musical character of the song.
5. Perform. The students play the song.
6. Develop. Work out the problems made manifest in performance. The need will be felt.
7. Rest. Frequent rests are necessary with beginners.
Informational Material

a. Equipment you should have.

1. Cello with complete set of extra strings.
2. Bow with hair clean and in good condition.
3. Bag for cello and bow, made of waterproof material.
4. A cake of cello rosin.
5. If you do not have a piano at home, you will need an A-440 tuning fork or pitch pipe.
6. A substantial folding music stand.

b. Care of your cello and bow.

1. Your cello. A cello is a fragile instrument and must be treated with care. Keep it and the bow in the bag when not in use. This protects it from moisture and changes in temperature which cause parts to become unglued. Keep the instrument away from radiators or any heat. When you are through practicing, stand the cello in the corner with the bridge turned towards the wall.

2. Keep it clean. Keep a soft cloth at hand to wipe off rosin dust. This should be done after each playing. Strings should be cleaned with a soft cloth dipped in alcohol at frequent intervals. (Be sure not to let any alcohol come in contact with the varnish.) Avoid use of oil or furniture polishes on the instrument.
3. **Openings, cracks, etc.** Rattles and buzzing sounds may be caused by open seams, cracks, loose tail pin, loose wrappings on strings, etc. In the event of these noises, show your instrument to your teacher immediately. The condition may necessitate a repair man.

4. **Pegs.** Tight, noisy pegs may be lubricated with a bit of dry soap and chalk on top of it. Slipping pegs may be put in order with a little chalk.

5. **Strings.** Do not loosen the strings when you are through playing. Keep them at the correct tension for playing at all times. If the strings are loose, the soundpost is likely to fall over.

6. **The bridge.** Keep the bridge in line with the notches at the middle of the F-holes. The feet of the bridge should fit the curve on the top of the cello perfectly. The curve of the top of the bridge should be the same as the large end of the fingerboard.

Watch that the bridge does not become pulled forward by the tightening of the strings. When the bridge begins to lean forward a bit, straighten it at once. Loosen the strings a little, then hold the bridge between the thumb and index fingers of both hands and pull it gently back to an upright position. If this is not done, the bridge will become warped and eventually will fall forward or break.
7. **The sound-post.** If the sound-post, which is inside the cello, falls, loosen the strings completely and take the instrument to a reliable repair man at once to have the post reset.

8. **The bow.** Rosin your bow before playing by drawing the bow-hair across a cake of cello rosin. Do not push it back. Lift it and draw it across again in the direction used the first time.

9. **Correct tension of bow.** Do not tighten the hair any more than is necessary for playing at any time. Always loosen the hair when you are through playing.

   Caution: Do not touch the bow-hair with your fingers. The oil from your fingers makes the rosin gummy. After a certain amount of playing the hair becomes so smooth and thinned out that it must be re-haired by a repair man.

10. **Washing the bow-hair.** When the bow-hair becomes soiled and greasy, it should be washed. Do not try this without your teacher's help or advice.

11. **Carrying the cello.** Carry the cello upright against your side with the bridge turned towards your body so that in case you bump against anything, the bridge will be protected.

**b. Tuning the cello.**

1. **The strings.** The outside strings (C and A) are tuned by the lower pegs. The inside strings (G and D)
by the upper pegs.

2. Turning the pegs. To tune the strings always turn the pegs downward slightly before tightening to raise the string to a higher pitch. At the same time, push the peg into the pegbox to prevent it from slipping.

3. Tuning. The strings are tuned in perfect fifths. At first the student should learn to tune each note accurately to the corresponding note on the piano. When he becomes proficient in tuning these unisons, he should then tune the A string to the tuning bar or piano, and then tune the D string to a perfect fifth lower while playing on the A and D strings simultaneously. Then, in like manner, the G string may be tuned to the D string, and the C string to the G string.

d. How to produce a tone

A tone is produced by drawing the bow at right angles to the strings. The bow should travel across the string half way between the bridge and the end of the finger-board.

The finger, wrist, and arm must be relaxed at all times. The hair on the bow must be tightened enough so that it does not permit the stick to scrape the strings when pressure is applied. Place the bow at the frog on the string. The bow does not rest flat on the string—rather the stick is inclined slightly toward the player.
Apply some pressure with the first finger, then a sudden pull downward on the bow will set the string in vibration. Immediately release the pressure, but continue drawing the bow across the string. This is a down bow and is marked: ▼. The reverse is an up bow, indicated thereby: √.

e. Definitions of signs used in this method in playing the cello:

0------Open string
1------1st finger
2------2nd finger
3------3rd finger
4------4th finger
W.B.---Whole bow
U.B.---Upper bow
L.B.---Lower bow
M.B.---Middle bow
▼    ---Down bow
√    ---Up bow
First Position

A

D

G

C
d. Cello Method

UNIT I

PLAYING PIZZACATO

Overview

The song material presented in Unit I represents the first attempts to find the notes with the left hand. The D (second) string is used for this initiation for reasons of accessibility and physical comfort. The teacher will, of course, instruct the pupils as to proper thumb position and proper stretch. The right hand will pluck the string so that complete concentration can be given to the finding of the pitches.

In lesson three the students try out their knowledge on the A string. The teacher explains that position remains the same, and that only a slight change in arm leverage has taken place. The G string is introduced in lesson 5 and the C string in one lesson, 7.

The songs in these lessons, up to this point make use of the major tetra-chord only with the third finger being used irregardless of string. Lessons 6 and 7, making use of the keys of D minor and F major respectively, introduce the second finger. From this point on, the keys are regulated in such a way that both second and third fingers are
constantly being brought into use.

By the completion of Unit I all of the fingering problems pertinent to first position will have been studied, the elementary rhythms reviewed and scale lines practiced. All of these problems have been met through the playing of familiar melodies.
ARE YOU SLEEPING

Our Singing World Series
Singing on Our Way, p. 51

Pizz.

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z
THEME FROM NINTH SYMPHONY

Pizz.

Beethoven

A

B

C

A

B

C

A
HOT CROSS BUNS

Pizz. Our Singing World Series
Singing and Rhyming, p. 45
AT PIERROT'S DOOR

Pizz.

Folk Tune

A

B

C

A

B

C

A

B

C
GAILY THE TROUBADOUR

Pizz.

Twice.55, p. 43
ARE YOU SLEEPING

Pizz.

Our Singing World Series
Singing on Our Way, p. 45

A

B

C
IN THE GREENWOOD

Pizz.

Folk Tune

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z
ONE, TWO, BUCKLE MY SHOE

Our Singing World Series
Singing on Our Way, p. 40
AWAY IN A MANGER

Pizz.

Traditional
UNIT II

USE OF THE LEFT HAND WHILE BOWING

Overview

The position of the left arm and hand should become somewhat automatic by now, or enough so that the skill of bowing can be added without any deleterious effect.

The Unit will begin with the tune "Hot Cross Buns." This has been chosen because there is little need for a sustained bow. A fast whole bow is considerably more accurate and easy to handle at the onset. The third lesson is a study in sustained bowing. The song "Now I Lay Me Down to Sleep" has been chosen because of the simplicity of fingerings involved enabling the student to devote most of his attention to bowing.

This section is designed so that the rudimentary problems of cello playing, relative to simultaneous bowing and fingerling, will be met and worked out while producing music.
HOT CROSS BUNS

Our Singing World Series
Singing on Our Way, p. 45

Arco
AT PIERROT'S DOOR

Arco

Folk Tunes
NOW I LAY ME DOWN TO SLEEP

Our Singing World Series
Singing on Our Way, p. 62
TWINKLE, TWINKLE, LITTLE STARS

Arco

Our Singing World Series
Singing on Our Way, p. 106
DRINK TO ME ONLY

Arco

Old English Air

A

B

C

DC al Fin

A

B

C
GRANDFATHER'S CLOCK

Arco Folk Tune

A

B

C

A

B

C

A

B

C

A

B

C
TAPS

Arco

U. S. Army Bugle Call
UNIT III

THE TIE AND THE SLUR

Overview

This problem is one, principally, of bowing. Up to this point, all of the bowing has been one long bow per note irregardless of the time value of the note.

The problem here is one of learning to use two or more notes per bow. In Unit II, the students became accustomed to playing ties across the bar at final cadences. The first lesson of this unit is the familiar tune "Good-night Ladies." In this lesson the beginners will see how tied values are utilized in other parts of songs. In the next lessons, two quarter notes are disposed on various pitches making it necessary to change fingers at mid-bow.
GOODNIGHT LADIES

College Song  

Arco

Allegro

Pizz.
HOT CROSS BUNS

Our Singing World Series
Singing on Our Way, p. 45

Arco

A

B

C
MARY HAD A LITTLE LAMB

Our Singing World Series
Singing on Our Way, p. 14
AUTUMN LEAVES

Arco

Our Singing World Series
Singing on Our Way, p. 112
HUMPTY DUMPTY

Arco

Folk Tune

A

B

C

2\2.\ 72

2\3.\ 72

2\4.\ 72

A

B

C
UNIT IV

SUPPLEMENTARY MATERIAL

Overview

An effort is being made in this section of the method to summarize and bring into practice the problems covered in the preceding sections. The melodies will be in the customary three parts and will be tunes that are fairly well known. No new technical problems will be introduced. Rather, the material will serve as a thorough review of all problems for the students and will offer the teacher an opportunity to check the progress of the class on these problems.

Because the material in this section has been written without the restrictions of catering to one specific problem, the arrangements tend to be more interesting and musical, and would serve adequately for concert or recital programs.

The procedure adhered to throughout the method in regards to the relative difficulty of the specific parts will still be in effect. Line A will still be the most difficult part and line C the least difficult. Each line will, however, review all the problems touched in the preceding pages.
GOOD KING WENCESLAS

Arco

Traditional

A

B

C

melody

A

B

C

melody

A

B

C
JOLLY OLD ST. NICK

Arco

Traditional
LULLABY

Folk Tune

A

B

C

melody

A

B

C

Pizz.

Pizz.

Pizz.
CHORALE

Arco

J. S. Bach

\begin{music}
\g#4
\begin{staffs}[n=3]
\slice{A}{}
\slice{B}{}
\slice{C}{}
\slice{A}{}
\slice{B}{}
\slice{C}{}
\end{staffs}
\end{music}
ARE YOU SLEEPING

Arco

Our Singing World Series
Singing on Our Way, p. 51
AMERICA THE BEAUTIFUL

Arco

Traditional
LULLABY

Arco

Brahms

A

B

C

A

B

C

A

B

C
CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this study has been to construct a beginning method for learning to play the cello which would meet the needs of individual differences among students and provide adequate attainment for three levels of ability.

Chapter I discussed the method of research, the organization of the report and the limitations of the problem. In Chapter II, the writer established the need for the report. Specifically included were, the need for class instruction on like instruments; then the need for providing for individual differences in class instruction. Chapter III presented a review of the philosophy and psychology of class teaching as accepted by authorities and an analysis of six current beginning cello class and private methods. The results of the analysis aided in the construction of the method book presented in Chapter IV. This chapter (Chapter V) presents a summary of the study and makes recommendations for further research.

a. Summary

In Chapter II it was found that class instruction has
been adopted as the most efficient and economical way to teach all academic subjects. It was decided that, if possible, it is advisable to have homogeneous groupings of instruments instead of heterogeneous groupings. The students are able to progress more rapidly in solving the particular technical problems of their instruments because of the similarity of the problems involved.

When these points pertinent to class instruction on like instruments had been validated, the problem of what had been done and of what is being done to meet individual differences in learning situations was approached. Research into the problem revealed that educational America is almost one hundred per cent aware of the problem and as fully aware that something must be done. The tragic part of the situation is that, in spite of awareness, not a great deal has been done.

There seem to be two general trends toward correction. The first, termed ability grouping, assumes that instructional groups can be made homogeneous in terms of ability. These homogeneous groups can then be subjected to standardized educational methods, textbooks, examinations, etc.

The second technique is not concerned with separation. It assumes that individual differences would arise even in the various ability groups. Therefore, in the heterogeneous groups, each student is really not considered a member of a
group but as an individual, the idea being that each child works at his or her own particular rate of progress.

Having established that there is a need for corrective measures to meet individual differences among students, an attempt was made to present reasons for teaching the cello in a class which would meet individual differences.

In Chapter III a survey was made of the philosophy and psychology of class teaching as recognized by leading authorities. It was found that a philosophy based on developmental psychology has proven very successful. In the functional application of this psychology we found that problems of technique are directly associated with and should be the outgrowth of the music itself. Technical problems should be related to insight into the music.

The analysis of the six cello method books was made to discover the approach, the sequence of technical problems, the scope, and the rate of progress. The findings in the analysis were evaluated and the procedures found consistent in the majority of the methods followed in constructing the method book found in Chapter IV. Actually, the sequence of problems used in this method was found to be consistent in five of the six methods studied. The analysis showed the approach to be very logical rather than psychological.

Before going on to other problems, the students learned the bowing techniques peculiar to each string. The open
strings were then used exclusively until certain basic rhythm patterns were learned. These problems were made up of whole notes, half notes, quarter notes, dotted half notes, eighth notes, and of course, the corresponding rest values.

When these bowing and rhythm problems had been mastered the left hand was brought into play. First position was introduced. When the feeling of the position had become familiar, the position was rapidly introduced on the other strings using all of the rhythms that had been mastered. Several pages of material were then in most cases devoted to practice melodies, exercises, and in general, a review of what had been learned. The idea behind these studies was, of course, to allow the student to feel at home in first position while bowing and reading.

The next problems explored were related to bowing again—the tie and the slur. The slur in some instances encompassed three and four notes per bow.

Two of the methods ended at this point; the other four, being somewhat elongated, introduced a new position, and more advanced technical problems. However, inasmuch as this report was designed to carry through first position only, the material in the latter pages of these four methods was not utilized in deriving criteria for the method.
As a result of the analysis, the sequence of technical problems for the method was set up under four general headings, each in turn broken down into lessons of various length.

The sequence of technical problems in the cello method of this thesis did not follow verbatim the sequence found in the methods analyzed. This was due to the mechanistic approach that was found as the philosophic basis of the six accepted methods. The open string exercises common to all were not in the previous musical experiences of the child and were meaningful only as a technical exercise. The developmental idea of playing familiar music from the beginning necessitated a change in sequence. Instead of bowing open strings to learn bow technique the students started immediately plucking familiar tunes with the left hand stopping the string on pitch.

The sequence was as follows:

1. The left hand—first position.
   a. Use of the right hand in pizzicato, the left hand stopping the strings for the tune. The D string was used first, followed by the G, A, and C.
   b. Use of the bow simultaneously with left hand first position on all strings.
2. Use of the right hand holding the bow.
   b. Bowing on the other open strings (one at a time in proper rhythmic pulsations for half notes, whole notes, dotted half notes, and eighth notes).

3. The tie and the slur
   a. Introduction of the tie, using two quarter notes.
   b. Use of the slur using two quarter notes.
   c. Three and four notes per bow.

The pizzicato, used in the beginning of Section 1, was a device designed to separate the two totally different skills of left hand fingering and right hand bowing.

Of the six methods studied, only two were technical in presentation. All three of the string class methods, and one of the private methods were melodic. In way of explanation the writer would like to point out that none of the methods analyzed were completely melodic. In learning bowing and rhythms on open strings, that is quite impossible (in the present connotation of melodic). Inasmuch as this method was a string class method, the material presented was principally melodic also.

When technique allowed, the musical selections were
arranged in three parts which could be played together in a group.

The purpose in writing the selections in three parts was to provide for individual differences among students. The problem of individual differences was discussed in Chapter II and it was found that some students learn rapidly, some slowly, and some at a near-average rate of speed. Evidence showed that the methods did not make provisions to meet individual differences. Therefore, the purpose of this study was to offer a solution to the problem.

Part A was written for the rapid learner, Part C for the slow learner, and Part B for the near average learner.

b. Recommendations

The method presented in this thesis has, at the time of this writing, never been used in class instruction. Even though it is felt by the writer, on the basis of practical experience in the teaching of the various musical instruments, that the material covers the problem adequately, it is recommended that further experimental study be made to test the validity of the suggestions made.
BIBLIOGRAPHY

Books

1. Dykema, Peter W. and Gehrkens, Karl
   The Teaching and Administration of High School Music.
   C. C. Birchard and Company, Boston, 1941.

2. McCauley, Clara Josephine
   Professionalized Study of Public School Music.

3. Mursell, James L.
   Human Values in Music Education.

4. Maddy, J. E. and Giddings, T. P.
   Instrumental Class Teaching.
   The Wells Music Company, Cincinnati, 1928.

5. Norman, Theodore F.
   Instrumental Music in the Public Schools.
   Oliver Ditson Company, New York, 1940.

6. Cook, Walter W.
   Educational Measurement.
   H. F. Lindquist, Ed.

7. Trow, William C.
   Educational Psychology.

8. Mursell, James L.
   Education for Musical Growth.

9. Murphy, Howard A.
   Teaching Musicianship.
10. Lamoreaux, Lillian A. and Lee, Doris May
   Learning to Read through Experience.

Yearbooks

1. Music Education Source Book.
   Music Educators National Conference, 64 East Jackson

2. The Thirty-fifth Yearbook of the National Society for
   the Study of Education, Part II.
   Public School Publishing Co., Bloomington, Illinois,
   1936.

State Guide

1. A Guide for the Improvement of the Teaching of
   General Music in the Schools of Arizona.
   Bulletin No. 2, State Department of Public
   Instruction, Phoenix, Arizona, 1951.

Method Books

1. Klingenberg, Johannes
   J. J. F. Dotzauer Violoncello Method.

2. Marchelli, Nino
   Carl Fischer Basic Method for Cello.

3. Lesinski, Adam P.
   Rhythm Master Cello Method.
   Gamble Hinged Music Co., Chicago, 1932.

4. Fischel, Max and Bennett, Aileen
   Gamble Class Method for Strings.
   Gamble Hinged Music Co., Chicago, 1931.
5. Keller, Marjorie M. and Taylor, Maurice D.
   *Easy Steps to the Orchestra Book I.*

   *Strings from the Start.*