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An investigation of the effects of a researcher-designed string music curriculum on the playing skills of mildly mentally handicapped middle school students grouped in homogeneous and heterogeneous classes

Van Camp, Diana Jean, Ph.D.
The Ohio State University, 1989

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AN INVESTIGATION OF THE EFFECTS OF A RESEARCHER-DESIGNED STRING MUSIC CURRICULUM ON THE PLAYING SKILLS OF MILDLY MENTALLY HANDICAPPED MIDDLE SCHOOL STUDENTS GROUPED IN HOMOGENEOUS AND HETEROGENEOUS CLASSES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Diana Jean Van Camp, B.M.E., M.M.

The Ohio State University

1989

Dissertation Committee:
A. Peter Costanza
Joan K. Lehr
Robert A. Gillespie

Approved by

A. Peter Costanza
Adviser
School of Music
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1989
This dissertation is dedicated to Jesus Christ,
my Lord and Savior.
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in Christ, for their prayers and encouragement.
October 24, 1946 .......... Born—Washington, D.C.

1969 ...................... B.M.E., Indiana University,
                     Bloomington, Indiana

1969-1972 ................ String Instrumental Music
                     Instructor, Alachua
                     County Public Schools,
                     Gainesville, Florida

1976 ...................... M.M., Florida State University,
                     Tallahassee, Florida

1975-1979 ................ String Instrumental Music
                     Instructor, Memphis City
                     Schools, Memphis, Tennessee
                     Violinist, Memphis Symphony

1979-1982 ................ Music Education Instructor,
                     Otterbein College,
                     Westerville, Ohio

1982-1985 ................ Teaching Associate,
                     The Ohio State University,
                     Columbus, Ohio

1985-1986 ................ String Instrumental Music
                     Instructor, Bexley City Schools,
                     Bexley, Ohio

1987-Present ............. String Instrumental Music
                     Instructor, Newark City
                     Schools, Newark, Ohio

FIELDS OF STUDY

Major Field: Music Education

Studies in Music Education.
Professors A. Peter Costanza and Jere L. Forsythe.

Studies in Music for Handicapped Learners.

Professor Joan K. Lehr


Professors Michael D. Davis, William G. Conable, and Robert A. Gillespie.
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CHAPTER I
INTRODUCTION

Introduction

A growing concern about educational, therapeutic, and recreational programs for handicapped children initiated the establishment of special education classes in the United States and Germany between 1869-1900. As special education classes developed, music educators and music therapists advocated music experiences for all children, including the mentally handicapped child.

Gaston (1964) emphasizes the importance of a rich sensory environment for every child:

The richer the sensory environment, the greater the development of the brain. Therefore, we understand why the sensory environment of the child must be rich (p. 4).

Gaston (1968) further states that music is an essential ingredient of this rich sensory environment:

The full fruition of our potential for humanness can never be attained unless we grow and develop within a rich musical environment (p. 13).
Howery (1968) expresses the importance of music for the mentally handicapped child:

If [a rich sensory environment] is a need of the average child, it is a necessity for the retarded child. Probably most important of all the values of music for the retarded child is the esthetic sensory experience (p. 52).

Grant (1977) recommends music as an aesthetic experience in which all mentally handicapped children can achieve success.

Music activity allows different levels and different kinds of participation that result in a feeling of gratification in a group activity (p. 17).

Graham (1965) reports the effect of early music deprivation on institutionalized mentally retarded children. He found that mentally handicapped children are more likely to be institutionalized if their environments have elements which directly or indirectly cause music deprivation.

Music experiences for mentally handicapped children began with the functional use of music activities within the special education classroom (Graham, 1975). As educational programs for the handicapped evolved, music programs for mentally handicapped children changed and developed.

Public Law 94-142, the Education of All Handicapped Children Act, was passed in 1975. This law entitles each handicapped child to a free and appropriate education in
The least restrictive environment. The provisions of P.L. 94-142 have many implications for the music education of handicapped children. Educators have re-examined music programs for the handicapped to determine their appropriateness for each child. Many children with handicaps have been mainstreamed into general music classes with their normal classmates. Music for mentally handicapped children has progressed from the functional use of music within the special education classroom to general music programs where music concepts are taught (Lehr, 1980).

Music programs for mentally handicapped children have for the most part been limited to general music. Brown (1981) reports the results of a survey of junior high school music teachers in Los Angeles concerning problems in mainstreaming. She found that the most significant involvement of mainstreamed students had been in general music classes. Instrumental music experiences have been provided within the general music program, and are usually limited to the playing of percussion and simple melody instruments such as the xylophone and melody bells (Alvin, 1976; Bailey, 1973; Carey, 1958, Nocera, 1979).

There are very few reports of instrumental music programs (band and orchestra) for the mentally handicapped. Rosene (1976) addresses this problem:

...most work in the field of music for the exceptional child has primarily explored
only the classroom activities of singing, reading music, movement, creating music, listening to music and playing rhythm instruments. Various classroom instruments such as guitar, banjo, auto harp, ukelele, and harmonica are sometimes included. Rarely, however, is concern shown for the possibilities of orchestral wind instrument instruction in planned curricula for the exceptional child (p. 9).

Williams (1984) reports similar findings:

Generally speaking, little has been done to provide instrumental music experiences in any systematic fashion to handicapped students, even though public school instrumental music programs have been provided to most other student populations for decades as part of the curriculum of many schools. Specific examples of instrumental music for handicapped students are few in number (p. 15).

P.L. 94-142 indicates the need for an appropriate education for all handicapped children. Therefore it would seem that the possibilities of instrumental music for the mentally handicapped child need further investigation.

Need for the Study

Music programs for the mentally handicapped were implemented in the United States in the 1800s. In 1848, Edward Seguin founded the first state institution with an educational program for the mentally handicapped. The music program, which consisted of singing and marching to drum beats, was included for its therapeutic value. Instrumental music was first included in the education of the mentally handicapped at the Ohio State Asylum in 1878.
According to authorities, children played wind, stringed, and brass instruments, and read music (Kraft, 1963).

Some twentieth century music educators and music therapists are skeptical of instrumental music programs for the mentally handicapped. Alvin (1976) expresses this opinion:

Unfortunately there does not seem to exist on the market an elementary wind instrument with a pure, musical tone, simple enough for a retarded child .... only a very few retarded children, if any, would be able to learn to play a stringed instrument with a bow. (p. 71).

Erickson (1970) surveyed teachers in Colorado to determine the status of music education for the educable mentally handicapped child. He found that there was a lack of direction in the music program for the mentally handicapped, and that teachers had the opinion that EMH children were incapable of all but the simplest music skills.

Music educators and therapists who have taught mentally handicapped students often recommend music programs that are limited to singing, listening, free and controlled rhythmic activities, creativity, and the playing of percussion and simple melody instruments such as the xylophone, melody bells, piano and autoharp (Alvin, 1976; Bailey, 1973; Carey, 1958; Scoggins, 1975). Scoggins reports some experimenting with harp, flute, clarinet, and violin. The students were allowed to touch the instruments
and to try to produce a sound.

Damer (1979), in a later study, reports positive attitudes among music educators towards mainstreaming handicapped students into general music and instrumental music classes. A survey of North Carolina music teachers produced the following information: 1. Elementary and junior high general music teachers were the most willing to have handicapped students mainstreamed into their classrooms. 2. Junior high and high school instrumental music teachers were more open to mainstreaming than high school choral teachers. 3. Ninety-one percent of the respondents believed that physically handicapped students should be mainstreamed, and sixty-eight percent indicated that mentally handicapped students should be mainstreamed into music classes.

Research concerning instrumental music for the mentally handicapped has produced encouraging results. Weber (1966) taught five trainable mentally handicapped students to play piano and certain band instruments. He concluded that the mentally handicapped can benefit from structured musical experiences having intellectual content such as instrumental music. Existing curriculum guides for the instruction of mentally handicapped children place too much emphasis on rhythm band instruments.

A study by Berry (1975) involved teaching trumpet to educable mentally handicapped children. Berry found that
eleven out of thirteen children developed some ability on the trumpet and were outwardly satisfied with their progress. He concluded that instrumental music study is feasible for the educable mentally handicapped child.

Rosene (1976) investigated wind instrument training for educable mentally handicapped children. He concluded that EMH children developed wind instrument musical performance skills through individual and group instructional procedures.

The literature reveals an apparent lack of research concerning string instrument programs for the mentally handicapped. A pilot study was completed at the Ohio State University as part of a course in music for the handicapped (Van Camp, 1983). The investigator concluded that violin classes for mildly mentally handicapped middle school students appear to be feasible and enjoyable.

More research is needed to determine the musical ability and music skill achievement level of mentally handicapped students before appropriate decisions can be made regarding music experiences for these children. Nocera (1981) expresses this concern:

Research focusing on the ability of the retarded to learn music skills and concepts is not adequately represented in the literature .. (p.9).

Until there is a body of literature that specifically investigates music learning in the retarded, music educators are in a poor position to make recommendations related to placement and curriculum
decisions concerning this group of special learners (p. 57).

There are many curriculum guides and reports concerning arts for the mentally handicapped (Gilbert, 1981; Kohn & Williams, 1980; Thompson, 1982). The music portion of many of these guides recommends rote singing, listening, movement, dance, and the playing of rhythm instruments and simple melody instruments as a music program for the MMH child. Many curricula for public school special education classes include a section on music. Grant (1977) comments on the content of these music sections and expresses the need for more research concerning the music skills of the MMH child.

The music sections usually fall into one of three categories: a simplified version of the music series scope and sequence charts ..., music as recreation, or an attempt to use music to accomplish some non-musical goals (p. 38).

More attention must be drawn to [the music skills] if music is to be used effectively with the mentally retarded, or if planned curricula require participation in music activities. Sufficient valid data relating to peculiar skills is noticeably absent from the literature (p. 32).

There are very few curricula of instrumental music for the mentally handicapped. A search of the literature revealed one band program and two piano courses for students with mental, physical, and emotional handicaps (Michal, 1987; Silini, 1979; Williams, 1978).
The apparent lack of studies concerning the implementation of instrumental music curricula for mentally handicapped students, especially in the area of string music, indicates a need for further research. Rosene (1976) states the problem quite clearly:

The potentialities of instrumental music instruction for the mentally handicapped remain relatively unknown because few successful methods of teaching them have been developed (p. 6).

Research in the area of string music for mildly mentally handicapped students could provide music educators with valuable information concerning appropriate course content, sequence of instruction, teaching materials and methodologies, and the feasibility of string classes for the mentally handicapped.

**Problem Statement**

Mentally handicapped children in public schools and private institutions seldom have an opportunity to participate in instrumental music programs, especially string classes and orchestra. Some music educators and administrators have believed that these students are not capable of playing band and orchestra instruments. There is an apparent lack of information concerning the sequence of instruction, teaching methodologies, appropriate materials, and student capabilities in the area of string music for mentally handicapped children. Until this
information is provided, it will be impossible for educators to make appropriate decisions concerning string instrumental music curricula for mentally handicapped students.

Purpose of the Study

The purpose of this study was to design and implement a string music curriculum for mildly mentally handicapped students. The following questions were addressed:

1. Was the curriculum content pedagogically accurate and appropriate for mildly mentally handicapped students?
2. Did student skill levels and attitudes toward string class indicate the feasibility of string classes for the mentally handicapped?
3. Which class setting was more appropriate for the mildly mentally handicapped, homogeneous (violin only), or heterogeneous (three or more different instruments)?

Sub-Purposes

In the process of organizing and implementing the study, the following questions were addressed:

1. What constitutes the foundation of a string music curriculum for the MMH student?
2. What are the goals and objectives of the
course of study?

3. What sequence of instruction is appropriate for MMH students?

4. What competencies should the students be able to demonstrate at each level?

5. What teaching methodologies are appropriate for MMH students?

6. What materials are appropriate for each level of instruction?

7. What lesson plans are appropriate for each level of instruction?

8. Are there relationships between I.Q. and string skill level; I.Q. and muscular coordination; muscular coordination and string skill achievement?

9. Is there a relationship between social skills and string skills?

10. How does the anticipated skill level compare to the actual skill level achieved?

Definitions

**Chronological Age.** An individual's total number of years and months since birth. (C.A.).

**Curriculum.** The total approach to group string instruction including a philosophy of string education, goals and objectives, sequence of instruction, student
competencies, materials, lesson plans, teaching methodologies, and anticipated social and musical events for each school year.

**Heterogeneous Class.** A class in which at least three different orchestral stringed instruments are studied.

**Homogeneous Class.** A class in which only one orchestral stringed instrument is studied.

**I.E.P.** The Individual Education Program written for each special student. It includes clinical test scores, student weaknesses and strengths, and recommended student activities.

**Mental Age.** A measure of determined mental ability based on the child's success in passing a series of tests ordered in difficulty at various age levels (M.A.).

**Mildly Mentally Handicapped.** Those exceptional children who possess sub-average general intellectual functioning (i.e. two or more standard deviations below the mean) existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (birth through age 18). MMH (mildly mentally handicapped) is referred to by some authors as educable mentally handicapped (EMH) (American Association of Mental Deficiency, 1973).

**Note Reading.** Learning music by reading the printed musical notation.

**Rote Method.** Learning music by much repetition and
use of memory without attention to the intellectual understanding of musical notation.

**String Classes.** Classes of four to six students in which one or more of the orchestral stringed instruments is learned.

**Assumptions**

For the purpose of this study, the following assumptions were made:

1. The students will have received no previous string instruction.
2. The students will have received no more than three months of instrumental music instruction.
3. The students will be successful students and citizens in their special education classes. They will be recommended by their classroom teachers on the basis of academic work and social behavior that is acceptable to the teacher.
4. Small classes are ideal for this population.
5. The students will voluntarily participate in the program.

**Limitations**

1. In an attempt to approximate typical public school instrumental instruction, this study
will not include private lessons.

2. The students chosen for the study will be MMH middle school students only. Students of other ages and exceptionalities will not be included.

3. The study will not include curricula for instruments other than strings.

Summary

Music educators and therapists have emphasized the importance of music for all children, including the mentally handicapped child. Music programs for this population have evolved from the functional use of music within the special education classroom to music classes in which music concepts and skills are taught.

Music programs for MMH children have been limited to singing, listening, rhythm activities, creativity, and the playing of percussion and simple melody instruments. There are very few instrumental music programs for MMH students, and some educators have been skeptical of the feasibility of instrumental music for mentally handicapped children.

Several studies concerning band and piano instrumental music programs for MH children have produced encouraging results (Berry, 1975; Rosene, 1976; Weber, 1966). The investigators concluded that all students developed some skills and that instrumental music programs for mentally
handicapped students are feasible. There is an apparent deficit of string instrumental music programs for MMH students.

There are many curriculum guides concerning arts for the mentally handicapped. The music portion of these guides recommends a general music program for MH children. Many curricula for public school special education classes contain a music section that falls into one of the following categories: 1. a simplified version of the music series scope and sequence charts, 2. music as recreation, or 3. music to accomplish non-musical goals.

There are very few curricula of instrumental music for MMH students. A search of the literature revealed one band music curriculum and two piano courses (Michal, 1987; Silini, 1979; Williams, 1978). There is an apparent deficit of string instrumental music curricula for MMH children.

P.L. 94-142 indicates the need for an appropriate education for all handicapped children. Research in the area of string music for MMH students could provide valuable information concerning appropriate course content and the feasibility of string classes for MH students.

The purpose of this study was to design and implement a string instrumental music curriculum for MMH students and to investigate the feasibility of string classes for this population.
CHAPTER II
RELATED LITERATURE

A search of the literature revealed a deficit of research in the area of stringed instrumental music for mentally handicapped children. However, significant studies pertaining to other kinds of music programs for the mentally handicapped have been reported. Research relating to general music, general music curricula, instrumental music, and instrumental music curricula will be discussed in this chapter in order to establish a rationale for the proposed research.

General Music

Methods, materials, and music experiences appropriate for mentally handicapped children have been investigated. Carey (1958) examined the materials, methods, and activities employed in the musical education of the mentally handicapped child in the public schools. Nine Illinois public school EMH classes were chosen for the study; two primary, five intermediate, and two junior high classes.
The children received four months of music instruction from Carey and the regular classroom teachers. Experiences included in the music classes were singing, listening, rhythmic activities, creativity, and the playing of percussion instruments. A wide variety of materials and methods were used to enhance the music activities.

The music teacher and the regular classroom teacher rated the progress of each child in the areas of listening, singing, body rhythms, and playing rhythm instruments. Student ratings were graphed and t scores were used to determine significance of achievement.

All children made some progress. Achievement in listening and singing was significant while some improvement was made in rhythms and the playing of rhythm instruments. The music program appeared to help improve the students' self-concept, social standing, and motor coordination.

Carey obtained information regarding existing music curricula for the mentally handicapped through a national survey of 510 school systems. She asked the following questions:

1. Is music a regular part of the curriculum for the educable mentally retarded?
2. Does the regular classroom teacher teach the music?
3. Does the regular music teacher teach the music?
4. Is music taught cooperatively by the classroom
5. What music areas were presented with the greatest success?

6. What types of materials were most effective?

7. What visual aids have been proven to be helpful?

8. What types of rhythms have been attempted?

9. What audio aids have been used with success?

10. Has creativity been attempted (p. 35)?

Carey made the following recommendations based on the information obtained from all aspects of her study: 1. A music program for EMH children should include experiences in rote singing, listening, free and controlled rhythmic activities, creativity, and the playing of percussion and simple melody instruments. 2. Music lessons should be structured around concrete learning experiences in which much repetition is used. 3. Music should be part of the curriculum for the EMH child because it enhances "emotional and creative expression, enjoyment and relaxation, physical development, and personal satisfaction" (p. 65).

McLaughlin (1963) surveyed special education teachers in the state of Michigan to determine what music activities, materials, and techniques were best suited for educable mentally handicapped children in a classroom setting. The following hypotheses were tested:

1. Some classroom music activities are more suitable than others for use with the elementary educable mentally handicapped child.
2. Certain schoolroom music materials are used more successfully than others with educable mentally handicapped children.

3. Some teaching techniques produce better results than others when used in presenting school music activities and materials to these children (pp. 144-145).

A sample of 75 teachers of elementary educable mentally handicapped children in the state of Michigan were selected for the study. These teachers taught a total of 885 children. The instrument selected was the direct mail questionnaire composed of eight parts with a total of 219 items. The items were constructed for multiple choice or affirmative-negative responses with provision made for responses other than those listed.

McLaughlin analyzed the data by a percentage comparison for both types of response items based on the total number of respondents for each questionnaire item. Selection or rejection of activities was made by the evaluation of each according to the following criteria:

1. The possible contribution the activity or material would make toward the development and perfecting of the child's mental, physical, emotional, spiritual, and musical potentialities

2. Its ability to supply the needs of the child

3. Its adaptability to the child's characteristics, abilities, and disabilities

4. On the basis of the percentage analysis of the data interpreted by the writer in the light of many years of teaching experience (p. 146).
The following activities were selected as suitable to be included in music programs for mildly mentally handicapped children:

1. Singing: vocal production and intonation, unison rote-song singing and two-part rote-song singing when limited to descant and round types of songs

2. Rhythmic activities: fundamental rhythmic response, singing games, dramatizations, the use of rhythm instruments, and folk and square dancing

3. Listening activities: active participation in quiet listening

4. Playing of instruments: melody instruments, autoharp and keyboard experiences (pp. 146-147).

Activities rejected as unsuitable were music reading, social dancing, class piano lessons, and the playing of band and orchestra instruments.

Special teaching techniques considered appropriate for the EMH child were:

1. the use of several modes of learning
2. moving slowly from one task to another
3. creating learning tasks with built-in success
4. using exact repetition
5. using a slow rate of speech
6. making enjoyment the goal rather than musical perfection
7. using a greater variety of music activities than for "normal" children
8. using more concrete learning experiences
9. teaching in a logical sequence with flexible plans.

McLaughlin received very little response to the instrumental music section of the survey. Only 13 children out of approximately 885 participated in large group instrumental music. They played clarinet, cornet, flute, trombone, baritone horn, violin, and drums in the band with non-handicapped children. A special class of instrumental music instruction for the EMR child was reported by four teachers. The class had four students and met two times per week. Two students received private instruction for 30 minutes a week.

Music reading programs for educable mentally handicapped children and their music aptitudes and abilities as compared with normal children were investigated in later studies. Buker (1966) researched the ability of EMH children to read rhythms in a classroom setting. He selected 75 EMH children in 6 third and fourth grade classrooms. Each child was given pre-tests which included the Peabody Picture Vocabulary Test, tests of laterality, song-recognition, rhythm matching ability, and music reading skills. Information regarding the home music environment of each child was obtained during the pre-test interview. Each child's chronological age, sex, parity (birth order), number of brothers and sisters, socio-economic level, and I.Q. scores were also recorded.
Three of the six classes were designed as control groups and continued with their regular music programs. The other three classes, the experimental groups, were given the seven-week rhythm reading treatment program in place of their usual music activities. Each teacher presented the same lessons using identical instructional material. The treatment program was based on the Richards (1964) music reading program which has been used successfully with normal elementary school children. The program included experiences with beat, pattern, phrase, reading rhythmic notation, and rhythmic dictation. A post-test consisting of the rhythm matching and rhythm or music reading sections of the pre-test was given to all 78 subjects.

Buker found that there was a significant difference in rhythm reading gain scores between the experimental and control groups. There was a significant correlation between rhythm reading gain scores and the child's I.Q., as well as a significant difference in rhythm matching gain scores between experimental and control groups. There was a significant correlation between song recognition scores and post-test rhythm matching scores and a significant correlation between pre-test rhythm matching scores and post-test rhythm matching gain scores.

Buker concluded that third and fourth grade EMH children can learn to read rhythms in a classroom setting.
He stated that rhythm and music reading could be part of a music program for mentally handicapped children in the future.

Kaplan (1977) compared the rhythmic responsiveness of normal children and educable mentally handicapped children. Her main objective was to develop a technique for evaluating rhythmic responsiveness in EMH children. The Test of Rhythmic Responsiveness was designed to assess the children's ability to respond to beat, tempo change, metric accent, durational pattern, and ostinato.

Kaplan tested 72 children, 12 normal and 11 EMH children at each of the three mental ages; six, seven, and eight. She found that both groups had the greatest difficulty with metric accent and ostinato. The ability to maintain the beat and respond to gradual tempo changes were the most highly developed skills in both groups. Echo clapping was the only skill that produced significantly different degrees of success between groups. The normal group was superior.

Nocera (1981) compared the achievement of music learning for normal and educable mentally handicapped children mainstreamed in music classes at the second and fifth grade levels. She assumed that EMH children were capable of achieving the basic goals of the music education curriculum given enough time, effective teaching, and the appropriate materials.
Nocera proposed the following hypotheses:

1. There are no differences in the mean achievement of music learning by mainstreamed EMR learners and their non-retarded classmates.

2. There are no differences in the achievement of music learning by EMR learners and their non-retarded classmates that can be attributed to specific cognitive abilities (p. 10).

Questions concerning: 1. music teacher awareness of the musical abilities of the mainstreamed EMH learners, 2. the effect of class placement on student musical achievement, 3. the effect of additional handicapping conditions on musical achievement, and 4. the effects of additional music instruction on the musical achievement of EMH children were investigated.

Twenty EMH children mainstreamed into second grade general music, 24 EMH children mainstreamed into fifth grade general music, and an equal number of randomly selected normal classmates were tested for the study. An analysis of variance was used to test the two major hypotheses and the probability level was established at .05 for all tests of significance.

The major conclusions of the investigation were:

1. EMR children at both second and fifth grade levels achieved lower mean total test scores than normal classmates. 2. In the second grade, no significant difference in mean scores was found on subtests measuring meter, texture, and intervals. 3. No significant difference in mean scores was found on subtests measuring
meter, melody, and form in the fifth grade.

4. Statistically significant differences were found for rhythm and tonality in the second grade. 5. Statistically significant differences were found on rhythm and a subtest that collectively assesses tonality, dynamics, melody, and texture for the fifth grade. 6. Items requiring interpretation of nonverbal symbols yielded significant differences in mean scores for both grade levels. 7. The relative difficulty of subtests was found to be similar for EMH children and their normal classmates. 8. Teachers have unfounded negative opinions regarding musical achievement among mainstreamed EMH children.

Music educators have reported successful musical productions involving mentally handicapped students. Beall (1985) wrote about a production of an abridged version of Oliver with trainable mentally handicapped performers. The students involved were ages 16-21 with an I.Q. range of 15-50. Oliver was chosen because it was a story that many of the TMH students could identify with, about "a poor boy, unwanted and looking for a loving family" (p. 30).

The story of Oliver Twist was adapted into a play with 12 scenes and a narrator. Music selections from the musical Oliver were incorporated into the play. Classroom teachers helped in selecting singers and actors, and taught the script. The physical education teacher worked out the choreography and two fifth grade non-handicapped classes
supplemented the chorus. Some non-handicapped performers were in the cast to give support and encouragement. Teachers and parents worked back stage with the chorus. The two TMH students who sang the major roles of Oliver and Nancy performed with "accurate pitch, sure rhythm, and flawless memory work" (p. 32).

The trainable mentally handicapped students proved their ability to perform artistically as part of the school community. It was noticed that this opportunity greatly enhanced their self-esteem. The non-handicapped students lost their fear of the TMH students and learned that handicapped students have talents and personalities worthy of appreciation.

Summary. Several studies have been concerned with methods, materials, and types of music experiences appropriate for the mentally handicapped child. Some investigators have concluded that rote singing, listening, rhythm activities (including square dancing and dramatizations), and playing of simple percussion and melody instruments is an appropriate music program for MH children. They have rejected band and orchestra instruments as being too difficult for these children.

Other more recent studies have explored music reading abilities of MH children and their music achievement level in mainstreamed settings. Researchers concluded that mentally handicapped children can learn to read rhythms in
a classroom setting and that they can reach an appropriate level of music achievement in a mainstreamed music class or musical production.

**Music Curricula for the Mentally Handicapped**

Many recreation guides, curriculum guides, and handbooks have been written on arts for the mentally handicapped. The music portion of many of these guides recommends rote singing, listening, movement, dance, and the playing of rhythm instruments and simple melody instruments as a music program for the MMH child.

Grant (1977) investigated numerous special education curricula compiled by state, city, and county school districts. He classified the music section of these curricula into three categories: "1. a simplified version of the music series scope and sequence charts, 2. music as recreation, 3. or an attempt to use music to accomplish non-musical goals" (p. 38).

**Category one.** Grant lists the Dekalb County, Georgia curriculum (Freeman, 1970) as an example of category one, a simplified version of the music series scope and sequence charts. Music educators were consulted for the music section, and the goals are musical. The musical goals listed are not based on testing of mentally handicapped children, and are not adapted to the needs of these children.
The South Carolina Department of Education curriculum guide (1969) is also in this first category. Three main areas are included in the music section: singing, rhythm, and listening. The goals are very general with no reference to activities, materials, or songs to be used in accomplishing these goals. The needs and skills of the MH child are not taken into consideration.

**Category two.** The Oklahoma State Department of Education curriculum for mentally handicapped (1970) is cited as an example from the second category, music as recreation. In this curriculum, the enjoyment of music is listed as a primary goal. Listening, singing, and moving to music are the important experiences. Many musical games are listed as well as a bibliography of songs, dances, recordings, and other materials. The specific needs of the MH child and a breakdown of age groups or developmental areas are not included.

**Category three.** The curriculum guide developed by Alexander (1972) for the Brevard County, Florida, school system is listed as one of the most comprehensive guides in category three, music to accomplish non-musical goals. It is designed around four areas of growth and development: mental health; social development and adjustment; language development; and physical development. This guide reflects the influence of music therapy programs and lists specific activities and suggestions for each objective. Little
attention is devoted to developmental stages, age levels, or particular music skills.

Some recent arts and music guides for handicapped children have approached music as a means of achieving non-musical goals. Thompson (1982) developed a music activities guide for special learners. The activities were field tested in an arts program for the handicapped that included children with a wide variety of exceptionalities and ages. The educational objectives of the guide are to help children develop self-awareness, self-esteem, have successful experiences, and learn developmental skills through music.

There are six sections of activities included in the guide: chant; song; playing rhythm instruments, bells, and guitar; movement; listening; and creating. Student objectives, teaching procedures, extensions and modifications, source materials, and diagrams are included for each activity. The activities are centered around 26 general and 15 musical objectives such as developing verbal communication, becoming aware of the environment, becoming aware of rhythms, and feeling the different moods in music. A sample music Individual Education Program (I.E.P.) is provided as well as an Individual Music Evaluation Form, resource materials, and information.

Kohn and Williams (1980) developed an arts activities guide for the severely and profoundly handicapped. The
guide was developed from a program of arts for severely and profoundly handicapped children and youth. The program was aimed at integrating the arts into an educational setting. During the final year of the project, the guide was tested at the five project sites. The arts included are music, visual art, dance, and drama.

The arts activities guide emphasizes the arts as a means of skill development although creativity and self-expression are considered important aspects of the activities listed. The activities are divided into awareness, imitation, and self-initiation levels. Each activity includes an expansion section that offers teaching methods and ideas not included in the three developmental levels. The modifications section offers ways in which activities can be adapted to suit specific handicapping conditions. Each activity incorporates at least one of these four skill areas: language development, motor ability, self-awareness, and socialization.

The guide lists a nine-point approach to curriculum and lesson planning for using the arts to develop skill areas and provides worksheets for their implementation. There is an index of activities and target skill areas for each art form. Every level of the activities includes materials needed, objectives for the student, and step by step teacher instructions for implementing the activity. An annotated bibliography and consultants for each area are
Some music curricula for mentally handicapped children combine musical and non-musical goals. Grant (1977) designed and implemented a developmental music therapy curriculum for the mildly mentally retarded, ages 6 through 12. The purpose of his research was:

to develop a competency-based music curriculum that would also help to meet selected special needs of mildly mentally retarded students, especially in the area of receptive and expressive communication skills, physical development, and socialization (p. 11).

There were four null hypotheses:

1. There will be no significant improvement in the singing of intervals, scales, and songs as measured by the instruments used in the study.

2. There will be no significant improvement in making distinctions between ascending or descending scales being played, distinguishing between high and low pitches, or discriminating and sequencing instrumental sounds, as measured by the instruments used in the study.

3. There will be no significant improvement in identifying and playing rhythm patterns, as measured by the instruments used in this study.

4. There will be no significant improvement in playing one, two, and three chord songs on the autoharp, as measured by instruments used in the study (p. 54).

A pre-test, post-test design was used for the study. Mildly mentally retarded students were tested on 20 selected musical tasks during September and again in May. The tasks included singing, listening, rhythm activities,
and playing the autoharp.

After the pre-test, the MMR subjects were grouped into three separate classes: primary (ages 6-7), intermediate (ages 8-9), and intermediate II (ages 10-12). There were 10 students in each classroom, and each class included male and female black and white students. The primary students met daily for 30 minute music therapy sessions. Both intermediate classes met for 30 minute sessions three times per week.

The results of the study revealed a significant improvement in all areas tested except area four, playing instruments. A t statistic was used to compare pre-test and post-test scores and the probability level was established at less than .05 for all tests of significance. Grant concluded that failure to make significant improvement in playing the autoharp was due to the difficulty of the task. He recommended approaching instrumental music on an individual basis with mentally handicapped children.

Grant's developmental music therapy curriculum consists of both musical and non-musical objectives. There are approximately 150 activities listed to accomplish these goals. The activities are constructed to enhance the child's development in receptive and expressive communication skills, language socialization, gross and fine motor coordination, and eye-hand coordination, and to
improve music behaviors.

The curriculum is developed around elements of sensory stimulation, auditory perception and processing, vocal development, and rhythmic perception. Different levels of play; individual, parallel, cooperative, and competitive, are incorporated into the curriculum activities.

Strockbine (1982) developed a music curriculum for mentally handicapped children based on Piagetian constructs. The purpose of the study was to develop an approach to the teaching of music to mentally handicapped children, based on the Piagetian constructs of perception, imitation, mental imagery, and play.

Strockbine addressed these sub-problems:

1. To trace the course of intellectual development in the areas of perception, imitation, mental imagery and play as outlined by Piaget;

2. To identify the developmental characteristics of mentally retarded children from a Piagetian perspective;

3. To formulate goals and objectives for music learning in the areas of perception, imitation, mental imagery and play, based on analogies that can be drawn between intellectual and musical development;

4. To develop teaching procedures for accomplishing the above goals and objectives;

5. To incorporate these goals, objectives, and procedures, together with suggested materials, into a series of lesson plans for teaching music;

6. To adapt these lesson plans to the developmental characteristics of mentally retarded children (pp. 2-3).
The curriculum consists of 26 musical lesson plans. Strockbine stresses the importance of choosing minimal goals and objectives for mentally handicapped children for each lesson, while allowing enough flexibility within the structure of the lesson to adjust goals, objectives, materials and criteria upward or downward as needed.

He recommends these methods and teaching procedures for EMH classes:

Modified teaching procedures which stress successive techniques of imitation; additional cues; prompts and instructions; familiar classroom procedures; live modeling of new material; personal interactions with each child; demonstrations or illustrations of a new manipulation followed by immediate "hands on" experience and simple tasks which explore only one aspect of a musical situation (p. 211).

Strockbine states that lessons should be sequenced according to the mental level of the MH child rather than by the "natural order" in music. Many of the music lessons are structured so that they can be divided into mini-lessons and units of study.

Strockbine concludes that music lessons should be a part of the school curriculum for the mentally handicapped child because these students frequently function within the first two stages of development, the sensori-motor stage and the pre-operational stage. Music can greatly enhance their development as children.

Summary. Many curricula for mentally handicapped children have been compiled by state, city, and county
school districts. The music section of these curricula usually fit one of three categories: 1. a simplified version of the music series scope and sequence charts, 2. music as recreation, 3. or an attempt to use music to accomplish non-musical goals (Grant, 1977). Seldom do these music sections address the special needs of the mentally handicapped child or attempt to combine musical and non-musical goals.

Some recent arts curricula and activities guides address the special needs of the MH child. Attention is given to teaching methods, learning styles, adaptations for handicapping conditions, lesson planning and I.E.P.s. Some curricula combine musical goals and developmental goals to provide a total musical and educational experience for the mentally handicapped child.

**Instrumental Music for the Mentally Handicapped**

There is very little evidence of instrumental music experiences for the mentally handicapped until the 1960s. Music for MH children had been confined to singing and playing of rhythm and simple melody instruments.

Knolle (1973) reports the success of a brass band for mentally handicapped children in Sioux City, Iowa. In 1962, Caris began a pilot project for special education students in instrumental music. The trumpet was chosen as the best instrument for the mentally handicapped children
because it is lightweight and the fingerings are relatively simple. Caris assumed that a child could advance to any of the other three valve instruments after learning to play the trumpet. No suitable instrumental material was available so it was necessary to adapt music to the lower and middle ranges of the trumpet.

The teaching procedures were as follows: 1. Each child was tested to find out the number of simple tunes he could sing and how well he could maintain correct pitches. 2. The trumpet mouthpiece was given to those who showed the most promise. They learned to buzz the mouthpiece by following the instructor's example. 3. After two weeks of buzzing, the students had their first opportunity to produce a sound on the trumpet. 4. If a good tone was produced, the teacher played a tune while the student made a tone on his instrument. 5. Next, students were taught the proper hand position for holding and finger ing the trumpet and began the first song, "Twinkle Twinkle Little Star".

Musical notation was shown on an enlarged staff and all fingerings of notes were marked. The students learned to follow the fingerings rapidly and to play higher or lower according to the level of the note on the staff. All tunes were kept in the lower range of the trumpet and seldom went above D2 or E2. Students who were unable to read music learned by imitating the fingerings used by the
Children had difficulty with changes in rhythm patterns so rhythms were limited to 2/4 marches and 4/4 swing tempos played by drummers using wire brushes. The teacher established the rhythm and melody of each selection to be played with a short introduction on his trumpet.

Instruments were purchased by parents, the school board, grant money, and civic donations. The more advanced students from the "Music Makers Band" made public appearances and traveled. As of 1973, the band had 125 members.

Weber (1966) used a case study approach to investigate instrumental music for the mentally handicapped. The purposes of his study were to develop methods and materials for teaching piano and band instruments to the severely mentally handicapped, to teach MH clients to play these instruments using symbol abstraction, and to develop teaching materials designed to facilitate transfer of learning to other areas. Weber assumed that observable musical growth as well as other desirable behavioral changes would result from the subjects' musical experience.

Weber's subjects were a group of five trainable mentally handicapped students, 10 to 21 years old. Each subject had one lesson each week for a period of 45 weeks. The music used consisted of a group of familiar melodies limited to a six-note range of middle C to A 1. The
instruments learned were the piano, clarinet, alto saxophone, cornet, baritone horn, and guitar.

The subjects listened to familiar melodies which they were asked to identify. An effort was made to build their musical confidence by having them sing and listen to the songs. The subjects were next instructed to match the symbols on the page with the same symbols on the keyboard and to learn each familiar song on their own using symbol matching. All the melodies were presented in notation form with fingering symbols or letter names underneath them.

The results of the study indicated growth in musical performance, measurable development of basic learning skills, increase in visual perception, auditory discrimination, reading, and eye-hand coordination. The students also developed basic skills in numbers concepts, writing, and speech. Weber concluded that the mentally handicapped can benefit from structured musical experiences having intellectual content such as instrumental music. Existing curriculum guides for the instruction of mentally handicapped people place too much emphasis on rhythm band instruments.

Berry (1975) investigated the correlation between I.Q. and the ability to play the trumpet. He used a case study approach with 13 educable mentally handicapped middle school students. Each child was given ten weeks of private instruction on the trumpet using a rote to note reading
method.

The following null-hypotheses were stated:

1. There will be no significant correlation between the child's chronological age and his ability to play the trumpet.
2. There will be no significant correlation between the child's mental age and his ability to play the trumpet.
3. There will be no significant correlation between the child's verbal I.Q. and his ability to play the trumpet.
4. There will be no significant correlation between the child's performance I.Q. and his ability to play the trumpet.
5. There will be no significant correlation between the child's full I.Q. and his ability to play the trumpet (p. 3).

A pre-program survey was administered to each child for the purpose of getting acquainted and determining any pre-existing musical understanding. The materials used were the Wechsler Intelligence Scale for Children, \textit{Learning Unlimited Book I} for trumpet, and a post-test. Gagne's theory of learning hierarchies served as the developmental model. The post-test was an oral test to determine each child's playing skill level, knowledge of musical terms, note reading ability, and level of enjoyment in playing the trumpet. The results of the survey and the post-test were not correlated.

The test results were as follows: 1. There was no significant correlation between chronological age and the ability to play the trumpet. 2. There were significant
correlations between mental age and post-test scores dealing with music reading and making proper responses.

3. Verbal I.Q. had a significant correlation with the post-test unit requiring the naming of the notes on the staff. 4. Performance I.Q. had a significant correlation with the development of the ability to play the trumpet. 5. Full I.Q. had a significant correlation with the ability to play the trumpet.

Berry concluded the following: 1. Each child developed coordination and motor skills to some extent. 2. Some children developed the ability to read and respond to musical notation. Others were able to learn pitches and rhythms without the use of standard notation. 3. Eleven out of 13 children developed some ability on the trumpet and were outwardly satisfied with their progress. 4. Instrumental music study is feasible for the educable mentally handicapped child.

Rosene (1976) investigated wind instrument instruction for educable mentally handicapped children. He taught thirteen elementary age EMH children using teaching procedures commonly employed in instrumental music programs. The purpose of the study was:

1. To determine the results of one semester of wind instrument training given to a group of educable mentally handicapped children.

2. To develop generalizations pertaining to instrumental music instruction for the educable mentally handicapped (p. 2).
The children had their choice of wind instruments for the 17 weeks. None had previous formal lessons on woodwinds and all had the same exposure to general music. The project was divided into four parts which conformed to a typical instrumental music program. The performance results were determined by analysis of the tape-recordings made of each music lesson, as well as the final tape when each child played all the materials learned. General musical achievement was determined from the scores on two standardized music tests administered before and after the wind instrument instruction.

Phase I, "Motivation and Recruitment," had the following activities: Rosene became acquainted with the children by singing songs and playing games with them. The children listened to tapes of different instruments and tried to identify each instrument. Musical concepts such as high-low, beat, and loud-soft were explained. On day three the first music test was given.

Rosene then demonstrated the woodwind and brass instruments and the children tried to produce tones on them. Letters were sent to parents and each child was given a "comic-book type of motivational brochure" (p. 30). The last two days of phase I included a general meeting as well as personal interviews and demonstrations of instrument care.
Phase II lasted nine weeks and consisted of two 30-minute private lessons per week for each child. Each lesson was planned according to individual abilities and taught by rote. The observable goal was being able to play the selected songs correctly. The songs used were "Mary Had a Little Lamb", which was modified to the range of a major third, "Twinkle Twinkle Little Star" for the leap of a 5th, stamina, and increased attention span, "London Bridge" for the dotted rhythm, "Bugle Calls - Taps and Reveille" for embouchure and finger dexterity, and "Michael Rowed the Boat Ashore" for the rhythm, which required tongue and finger coordination. Fingering and position numbers were placed beneath the written notation after the melodies were learned. The children sang each melody and listened to taped replays of their performance.

Phase III was group instruction and lasted five weeks. There were no individual lessons during this time, only ensemble rehearsals three times a week. A daily routine was followed to ensure good rehearsals. Each rehearsal began with different rhythm patterns played on each note of the B flat scale. The musical selections were rehearsed in concert order. The children were encouraged to verbalize individually by stating name, instrument, note names, and instrument parts. Phase IV lasted two weeks and included five mini-concerts in special education classes, a video-taping session and a final public performance.
Rosene concluded the following:

1. EMH children developed wind instrument musical performance skills through individual and group instructional procedures.

2. Teaching procedures utilizing imitation and rote techniques were appropriate for the EMH child.

3. Group cooperation and interaction, usually absent or limited in classrooms of EMH children, developed as an adjunctive result of instrumental music ensemble participation.

4. The length of attention span improved progressively during the semester of wind instrument instruction.

5. Instrumental music instruction resulted in significant gain scores on the Colwell *Music Achievement Test* (Test One).

6. Listening sensitivity and singing ability seemed to improve and positive changes in attitudes toward music were observed.

7. In the opinion of the school's psychologist, all EMH subjects in the thesis group showed progressive improvement in peer interaction, socio-emotional maturity, and self-awareness as a result of the semester of wind instrumental music instruction (pp. 336-337).

In a pilot study, Van Camp (1983) investigated group violin lessons for mildly mentally handicapped teenagers. The violin class consisted of four MMH teenagers who received two 45-minute lessons per week for five weeks. The students were taught by rote, although they were briefly introduced to written notation with fingerings after the fifth lesson. At the end of the ten lessons, each student was able to play four folk songs with acceptable intonation, posture, playing position, tone, and
correct rhythm in a steady tempo.

Van Camp found that much repetition is needed in teaching MMH violinists as well as exercises to promote muscle coordination and finger dexterity. She concluded that violin classes for mildly mentally handicapped teenagers appear to be feasible and merit further investigation.

Summary. There has been a growing interest in instrumental music programs for the mentally handicapped in the last 25 years. Researchers and music educators have investigated brass, wind, percussion, and string instrumental music experiences for MMH and TMH children and young adults. All investigators have concluded that instrumental music programs for mentally handicapped students are feasible and that these programs deserve further consideration.

Instrumental Music Curricula

There are few curriculum guides concerning instrumental music for handicapped students. Silini (1979) designed and implemented a group piano course for mentally retarded adults at the University of Kansas. The course objectives were to "enhance each student's life through participation in the arts and to develop an appreciation of music using the piano" (p. 72). Class activities were structured to develop piano skills, rhythm reading, and
playing skills. Each student's musical accomplishments, social interaction, and general development were recorded at every lesson. Classes met once each week for 30 to 45 minutes. The first class was structured as follows with other classes expanding on this structure:

1. General topography
   a. Black keys and white keys
   b. High, middle, and low register and how they relate to high sounds, middle sounds, and low sounds.
   c. The instructor improvises a melody with high, middle, and low clusters in time. Left hand plays low sounds. Right hand plays high sounds. Both hands play middle sounds.

2. Study of right hand, left hand, and finger numbers.

3. Music alphabet: ABCDEFG
   a. Find all D's on the keyboard.
   b. Find all G's on the keyboard.
   c. Identify the white keys as they relate to the black keys.

4. Echo clapping
   Using these notes values, the instructor claps rhythms in 4/4 meter. Students repeat what they hear. Start with one-measure patterns and increase to two-measure patterns (p. 74).
   \[ \text{Echo clapping patterns} \]
   \[ \text{Rhythms in 4/4 meter} \]
Lesson plans were developed from week to week and modified according to student needs. Rote learning was used to introduce rhythms and melodies. Students echo-clapped rhythms and shaped melodic contours in the air. Many tactile experiences were incorporated such as finding certain keys on the piano with eyes closed. Students had the opportunity to lead certain class activities including echo-clapping and finger-naming games.

Melodies were learned by associating them with a particular four-note scale. Five-note scales were learned by playing and matching patterns on the board, playing and singing letter names, and playing and singing finger numbers. Each hand was played separately. The instructor incorporated table-top exercises to help students coordinate hands. The students echo-tapped rhythms on the piano top and eventually played them on the keyboard. Songs were learned phrase by phrase with students and teacher alternating phrases. Students learned triads beginning on F♯, G, D, C, and A by associating them with the corresponding five note scale. During the last half of the course, each lesson included a period of private instruction with students using head sets.

Silini stated that the course had positive results for mentally handicapped students. Students developed skills in areas of self-organization, self-acceptance, and the ability to relate to others. Expressive piano skills were
developed as well as knowledge of musical notation. Silini concluded that other teachers could be successful in teaching music to mentally handicapped adults in instrumental music programs.

Williams (1978) devised a curriculum of brass and percussion instrumental music for handicapped students in the Great Falls, Montana, public schools. The Great Falls Special Education Pilot Project in Music Performance was founded in 1974 on the philosophy that "every child has the right to have aesthetic encounters in music" (p. 3). The purpose of the project was:

- to provide adequate and appropriate instrumental instruction opportunities to the intellectually, physically, and emotionally handicapped students in the Great Falls area (p. 3).

Three major objectives were developed:

1. Extend instrumental instruction and band opportunities to the widest representation of handicapped students in Great Falls.

2. Provide basic experiences in rhythm and music response activities to students participating in the project.

3. Develop an instructional model suitable for dissemination and adoption in other communities (p. 3).

Three-valve brass instruments were chosen for the project (named the Great Expectations Band) because of the variety of instruments and the minimal motor skills required to play them. Brass instruments included in the band were trumpet, cornet, flugelhorn, trombone (with adjustments for the handicapped), baritone, and tuba.
Percussion completed the instrumentation of the band. Percussion students were required to play all the instruments including xylophone, concert bells, tuned tom-toms, temple blocks, and all non-melodic instruments including snare drum, bass drum, and cymbal.

The curriculum for the Great Expectations Band included the use of standard musical notation. The goals were melodic accuracy and facility, rhythmic perception and response, tone development, and intonation. The band instructors developed a music skills sequence based on the belief that "...there are basic concepts, skills and responses that are fundamental to successful music performance ..." (p. 10). The sequence was developed by identifying the skills to be taught, breaking them down into component parts, and ordering them from simple to complex.

Two music skills matrices were then developed for brass and percussion instruments in order to:

1. Order tasks in the sequence of skills to be learned.
2. Keep learning tasks chronologically based.
3. Control all problems but the single learning task.
4. Aid in measuring learning (p. 11).

The music skills matrices focused on the sensory dimensions See to and Hear to. Precision Teaching techniques were used as tools to enhance learning for the Great
Expectations musicians. Precision Teaching provided the following:

1. A precise means of describing and measuring performance.

2. A unique but simple recording and charting procedure.

3. Techniques for analysis of patterns and formula of behavior which shows up on charts (p. 4).

All objectives developed for students related to the brass or percussion skills matrices. Students began by working on individual objectives followed by ensemble work. The musicians had two 30-minute lessons per week. Each lesson consisted of two precision exercises, work on a current band song, and playing an exercise in the book *Learning Unlimited*.

Timings of skills were done in at least one of the two weekly lessons and the results were recorded on a chart. "Aim" (or minimum responses required per minute) was established for each skill. Students remained on each timing until they had achieved "aim" for at least one month. Then monthly maintenance timings were done to insure retention.

Students were asked to practice 20-30 minutes daily and turn in weekly practice sheets. Close contact with parents aided student success.

The project instructors noted that the Great Expectations Band members played at least as well as non-handicapped elementary students in their school
district. Parents reported that the progress of the handicapped child in their families compared favorably to the progress of the non-handicapped children. All objectives for the project were met or exceeded.

Michal (1987) proposed the adaptation of a systematic instruction model to teach keyboard skills to handicapped students. The questions addressed in the study were as follows:

1. Is the systematic instruction model an appropriate system for teaching keyboard skills to students with handicaps?
2. How can the systematic instruction model be adapted to teach keyboard skills?
3. Is there a developmental order to the presentation of keyboard skills?
4. Is it possible to develop measurable objectives from a developmental sequence of piano instructional steps?
5. Is such a system practical for use in a typical independent piano studio setting?
6. How can individual student progress be monitored from week to week in such a setting?
7. Is it realistic to propose that such a system be used by piano teachers who do not have specialized training in special education? (p. 12)

The model used was Stephens' Directive Teaching Instructional Management System. Four components of this model (assessment, planning, instruction, and evaluation) were adapted to design a program of piano instruction termed "Intentional Teaching."
The program was used to teach 15 mentally, physically, and behaviorally handicapped students enrolled in a private piano studio.

Six areas of keyboard performance, Improvisation, Harmonization, Technique, Reading/Adapted Reading, Rhythm, Theory, and Performance/Repertoire were investigated. A lattice format was used to delineate subcategories of the six areas of performance. This format included prerequisite skills and fundamental stages of beginning piano instruction. A continuous record keeping system was provided in a graph booklet. Short term objectives and weekly progress were recorded. Annual progress was shown on a chart called "Milestones in Piano Skill Development for Handicapped Persons." Information from the chart was used to plan instruction for the following year.

Several elements of a systematic formative evaluation approach to systematic instruction were adapted into the program, and contributed to its success: 1. systematic and frequent monitoring of the instructional program, 2. program modification based on the analysis of the data, 3. the use of behavior modification, and 4. the use of graphed data displays.

Michal concluded that piano instruction is compatible with the systematic instructional model because piano skills can be sequenced, defined in behavioral terms, and measured by observation of performance. The process was
implemented successfully in this study, and all handicapped students made measurable gains in each area of keyboard performance. It would appear that the adaptation of the systematic instruction model to piano instruction is appropriate for teaching keyboard skills to handicapped students.

**Summary.** Several studies have been concerned with instrumental music programs for the mentally handicapped. Information gained from this research has provided valuable methods, materials, and approaches to instrumental music for mentally handicapped children.

However, there are very few curricula of instrumental music for mentally handicapped students. Silini (1979) has contributed a group piano course for MH adults. The structure of lesson plans, rote learning techniques, note reading methods, and peer teaching offer important information concerning successful instrumental music curricula. Williams (1978) has provided a very comprehensive curriculum of brass and percussion instrumental music that has been tested and proven successful for several years. Many of the teaching methods employed in the Great Expectations project such as precision teaching, frequent evaluations, positive reinforcement, music skills matrices, and ensemble experiences and performances could be included in future
instrumental music curricula for the mentally handicapped. Michal adapted a systematic instruction model to teach keyboard skills to handicapped students. It is possible that systematic instruction is adaptable to other areas of instrumental music for mentally handicapped children. The literature reveals an apparent lack of stringed instrumental music curricula for this population.

Implications for the Research

Music programs for mentally handicapped children have improved and increased in number in recent years. Programs have evolved from simple activities such as rote singing, listening, and playing of rhythm instruments to include music reading and musical achievement in mainstreamed music classes and musical productions.

Many contemporary music curricula address the needs of the MH child in the areas of sequence of learning, learning styles, developmental goals, and music goals. The main purpose of these curricula is the total musical and educational development of the mentally handicapped child.

Research and on-going programs in instrumental music for mentally handicapped students indicate the feasibility and desirability of instrumental music for MH children. Investigators report performance success with a variety of approaches, methods, and class settings. Some instrumental music curricula for MH learners have evolved as a result of
music projects for the handicapped.

There is one area of music for the mentally handicapped that has not been properly addressed thus far, string music and orchestra. Previous research findings concerning the ability of MH students to participate in instrumental music programs and to read music in mainstreamed settings would indicate the possibilities of a successful strings and orchestra program for these children. Research is needed to determine appropriate course content, sequence of instruction, teaching materials and methodologies, and the feasibility of string classes for the mentally handicapped.
CHAPTER III
PROCEDURE

Introduction

The purpose of this study was to design and implement a string music curriculum for mildly mentally handicapped middle school students. The following questions were addressed:

1. Was the curriculum content pedagogically accurate and appropriate for mildly mentally handicapped students?
2. Did student skill levels and attitudes towards string class indicate the feasibility of string classes for the mildly mentally handicapped?
3. Which class setting was more appropriate for the mildly mentally handicapped population, homogeneous (violin only), or heterogeneous (three or more different instruments)?

To seek answers to these questions, a procedure was developed to design a suitable string music curriculum for mildly mentally handicapped middle school students. The curriculum was evaluated by a panel of string music
education experts, a special education teacher, and an expert in music for handicapped learners to determine if it was pedagogically accurate and appropriate for MMH middle school students.

Middle school students were chosen for the study instead of elementary school students in order to insure the possibilities of student success. It was assumed that the older students would be better equipped developmentally to participate in string instrumental music. Twenty-four MMH students from middle school classes in the Columbus, Ohio, city schools served as subjects in the study. The students were divided into four classes of six students and each class was randomly assigned to a homogeneous or heterogeneous structure. Each class received 24 instructional lessons from the researcher-designed curriculum over a period of 12 weeks.

Following instruction, student performance was videotaped and evaluated by the panel of string education experts using a researcher-designed performance evaluation form. After the experts had viewed video tapes of individual and class performances, they responded to a questionnaire inquiring about the feasibility of string classes for MMH students and the most suitable class setting (See Appendix A). Student attitudes toward string class participation were measured by a researcher-designed attitude inventory.
The Curriculum

The String Music Curriculum for Mildly Mentally Handicapped Middle School Students was designed on the basis of established string pedagogy procedures (Culver, 1981; Gillespie, 1984; Rolland, 1974) and researched information concerning the characteristics of mildly mentally handicapped students (Nocera, 1979; Lehr, 1977; Suran and Rizzo, 1983). In the process of developing the curriculum, the researcher also addressed the following questions:

1. What constitutes the foundation of a string music curriculum for the MMH student?
2. What are the goals and objectives of the course of study?
3. What sequence of instruction is appropriate for MMH students?
4. What competencies should the students be able to demonstrate at each level?
5. What teaching methodologies are appropriate for MMH students?
6. What materials are appropriate for each level of instruction?
7. What lesson plans are appropriate for each level of instruction?

The original curriculum included two levels of instruction, Beginning String Class and Intermediate
String Class, and contained the following: 1. a philosophy of string music education for the MMH student, 2. pertinent definitions, 3. goals of a string program for special students, 4. the program structure for each level, 5. course objectives for each level, 6. expected student competencies for each level, 7. a student evaluation form to be sent to parents, 8. musical and social events for each level, 9. an implementation section containing characteristics of MMH students, teacher competencies, teaching methodologies, lesson planning, music materials, a sample lesson plan, a student evaluation form, a teacher evaluation form, and 10. a bibliography of recommended reading about music for exceptional children (See Appendix B).

A curriculum evaluation form developed by the researcher was used to evaluate the content of the curriculum (See Appendix C). The panel of experts determined the content validity of the evaluation form by comparing the form to the content of the curriculum. Four of the experts stated that the String Music Curriculum Evaluation Form did have content validity, and one expert stated that it did not have content validity. After the content validity of the evaluation form was established, the experts determined the content validity of the curriculum by using the curriculum evaluation form.
The curriculum evaluation form had six sections: 1. Philosophy, 2. Definitions, 3. Goals, 4. First Year of Instruction, 5. Second Year of Instruction, and 6. Implementation. The experts were asked to evaluate each section by circling a number: 0. unacceptable, 1. needs revision, 2. acceptable, 3. excellent. A space for comments was provided for each section of the form.

After the initial evaluation of the curriculum, it was revised according to the recommendations of the experts. The experts then re-evaluated the curriculum using the curriculum evaluation form.

All experts agreed that the beginning level of instruction was pedagogically sound and appropriate for MMH middle school students, and that the 12 weeks of instruction could begin.

The String Music Attitude Inventory for Special Students

A brief attitude inventory was designed by the researcher to determine student attitudes towards string class. The five objectives of the inventory were: 1. to determine whether or not the students liked the twelve weeks of string class, 2. to determine whether or not the students liked playing a stringed instrument, 3. to determine whether or not the students would continue to play a stringed instrument if they had the opportunity, 4. to determine whether or not these students thought
other special students would like playing a stringed instrument, and 5. to determine whether or not these students thought other special students should have an opportunity to take string classes.

Questions were constructed for each objective. The content validity of the attitude inventory was determined by a panel of experts; a special education teacher, and two music education experts with expertise in tests and measurements. The experts compared the questions developed for the attitude inventory with the objectives of the inventory as stated above.

The content of the attitude inventory was considered valid by all experts. Two experts stated that the negative questions might be confusing to the students, so all negative statements were eliminated. One expert stated that written sentences might be too difficult for these students to comprehend. After further consultation with special education experts, the researcher decided to present written questions to the students and read them aloud. Any words or sentences that seemed difficult to comprehend were explained.

The final version of the attitude scale contained 2 examples and 12 test items. The students had to circle one response to each statement from a choice of three: 1. agree, 2. not sure, or 3. disagree. The attitude scale was administered on the last day of class, after the
The Performance Evaluation Form for MMH Middle School String Students was developed by the researcher to determine the level of student performance after the twelve weeks of string instruction (See Appendix E). The content validity of the form was determined by the panel of three string education experts through a comparison of the form and the lesson plans used during instruction.

Two of the string education experts stated that the Performance Evaluation Form did have content validity although one stated that it was "marginal." The third expert stated that the Performance Evaluation Form did not have content validity because the choices for measuring student performance were not precise. He recommended definitions of terms and degrees of acceptability as a means to more accurate measurement of student skills.

The Performance Evaluation Form was divided into three sections: 1. Technique, 2. Music, and 3. Ear Training. The Technique section included Body Position, Instrument Position, and Bow Hold and Open String Bowing. The experts were required to circle one answer from a choice of five: 1. unacceptable, 2. poor, 3. acceptable, 4. very good, 5. excellent.
The music section of the form listed each music selection learned by the students. The experts were required to evaluate student performance on each piece of music according to seven components of acceptable performance: 1. correct notes, 2. correct rhythms, 3. good intonation, 4. good tone, 5. steady tempo, 6. adequate right hand skills, and 7. adequate left hand skills. The experts gave each component a rating from one to four: 1. none, 2. sometimes, 3. most of the time, and 4. all of the time.

The Ear Training section had two examples with four criteria for evaluation of performance: 1. correct notes, 2. correct rhythms, 3. good intonation, 4. steady tempo. The experts were required to circle one answer from a choice of four: 1. none, 2. sometimes, 3. most of the time, and 4. all of the time.

Selection of the Sample

The sample was taken from classes for mildly mentally handicapped students in the Columbus, Ohio, public school middle schools. Four schools were selected on the basis of location (proximity to the university) and student availability. Six students from each school were selected to form a string class on the basis of I.Q. (range of 50 to 80), social and academic behavior acceptable to the special education teacher, and no major physical or sensory
impairments.

The researcher began the study with 24 subjects. No students willingly dropped out of the program, however, two were expelled because of consistently unacceptable social behavior.

A file was compiled for each student and contained the following: I.Q., C.A., social skills, previous musical experiences, academic achievement, string skill test results, and attitudes towards string class.

**Equipment, Facilities, Music, and Materials**

**Equipment.** School-owned instruments were secured from various Columbus city schools and brought to the four locations for use by MMH string students. Most violin students used a full size instrument, although three students needed a 3/4 size violin. The violists used 15-inch violas and the bass player who was over six feet tall used an adult size (3/4 size) bass. The cellists all used 3/4 size cellos, although one student would have been comfortable with a full size instrument. The students were required to leave their instruments at school so that home practice was not possible.

**Facilities.** All string classes were held in rooms with proper lighting, ventilation, and all conditions conducive to quality teaching and learning. Music stands, chairs, chalk, a blackboard, and a piano were standard
equipment in each classroom.

**Music.** Music was selected on the basis of skill requirements and age appropriateness. A graded list of melodies was compiled for the twelve weeks of instruction, with the understanding that students would probably be unable to complete the entire list. The following melodies were selected:

- Hot Cross Buns
- Mary Had a Little Lamb
- Au Claire de la Lune
- Who's That Tapping at My Window
- Chopsticks (first half)
- Jingle Bells
- French Folk Song (first half)
- Old MacDonald
- Lightly Row
- Reuben and Rachel
- When the Saints Go Marching In

**Materials.** The materials used during the instruction period included: 1. large charts of line notation with color-coded fingerings for each piece learned (See Appendix K, p. 260), 2. four different brightly colored rolls of tape to mark finger placements on fingerboards, and 3. musical notation booklets containing the songs "Hot Cross Buns," "Mary Had a Little Lamb," "Who's That Tapping at My Window," "Au Claire de la Lune," "French Folk Song," and "When the Saints Go Marching In" with color-coded fingerings underneath each note. "French Folk Song" and "When the Saints Go Marching In" were chosen for the music booklet because of their potential musical appeal, even though they are somewhat more difficult to play. Each
student received a booklet to use in class and to keep as a memento of the program.

Class Structure

Two classes were randomly assigned a heterogeneous structure (three or more instruments) and the remaining two classes were assigned a homogeneous structure (violin only).

School A. Class A students were 13 and 14 year olds in the sixth grade. The class structure was heterogeneous and included four boys and two girls. The two girls and the smallest boy played violin and another boy played viola. The remaining two boys played cello because no one was willing to play the bass. One cellist was expelled from this class during the fourth week of instruction because of consistently unacceptable social behavior. The class met on Monday and Wednesday mornings from 8:15 to 9:00 a.m.

School B. Class B consisted of 14 and 15 year olds in the seventh and eighth grades. The class structure was heterogeneous with three girls and three boys. The three girls played violin, and the three boys played viola, cello, and bass respectively. The class met on Monday and Wednesday from 1:30 to 2:15 p.m.

School C. Class C students were 14 and 15 year olds in the seventh and eighth grades. The class structure was homogeneous (violin only), and the students were all
female. The class met Tuesday and Thursday morning from 10:15 to 11:00 a.m.

School D. Class D consisted of 14 and 15 year olds in the seventh and eighth grades. The class structure was homogeneous and the students were all female. One student was expelled from class during the sixth week of instruction for consistently unacceptable social behavior. The class met Tuesday and Thursday from 11:45 a.m. to 12:30 p.m.

Methodology

Each class received twelve weeks of instruction with two 45-minute lessons per week, taught by the researcher. All groups received a similar sequence of instruction with similar lesson plans, delivery, and activities. Rote teaching was used to introduce all songs and technical skills. Charts of finger numbers were used to aid retention of fingering patterns in songs. To aid intonation and left hand placement, colored tapes marking finger placements were placed on fingerboards.

After 12 string music lessons, booklets of standard musical notation with color-coded fingerings replaced the charts. The booklets of standard notation were used in order to acquaint students with notation and to help them learn to read music placed on a music stand.
Lessons were taped-recorded and videotaped frequently to evaluate student progress and the consistency of teacher delivery (See schedule in Appendix F). The pedagogical sequence was similar to one used for non-handicapped students. For the MMH students, the sequence moved at a slower pace and involved greater amounts of exact and varied repetition.
THE TWELVE WEEKS OF INSTRUCTION

Each class received two 45 minute lessons per week for 12 weeks. After the fourth week of instruction, students had one week off for spring break.

Week I

**Right Hand Skills**
- 1. Bow Hold

**Left Hand Skills**
- 1. Learn parts of instrument.
- 2. Body posture
- 3. Instrument hold

**Ear Training Skills**
- 1. Match simple rhythms.
- 3. Sing "Hot Cross Buns" with words and fingerings.

**Sample Teaching Devices**
- 1. Telescope
- 2. Tap all fingers on bow.
- 3. Rabbit with pencil, then bow
- 1. Name parts of instrument.
- 2. "Grow an inch" to lengthen body.
- 3. Numbers game
- 1. Echo clap simple rhythm patterns of $\text{do}$, $\text{do}$, and $\text{re}$ notes.
- 2. Match open string pitches plucked in half notes.
- 3. Echo sing "Hot Cross Buns" with words, then fingerings.

All classes were tape-recorded to monitor consistency of delivery and lesson structure. Student behavior and attitudes were very positive during this first week. The sixth grade class appeared to have a shorter attention span than the others.
Week II

Right Hand Skills

1. Bow Hold
2. Bowing from the lower arm
3. Flexible bow hold

Left Hand Skills

1. Instrument hold
2. Left hand shape

Ear Training Skills

1. Learn names and sounds of open strings.
2. Match repeated open string pitches on different rhythms.

Sample Teaching Devices

1. Telescope, Rabbit
2. Shoulder bowing
3. Push and pull
4. Spider crawl

Sample Teaching Devices

1. Student lead numbers game
2. Curve fingers in proper hand shape, tap fingers simultaneously.
3. Put fingers down on one string, pluck string under tunnel.
4. Sing "Hot Cross Buns" with fingerings while manipulating fingers of left hand.
5. Pluck "Hot Cross Buns" on instrument.

Class C was videotaped in the second week of instruction, lesson three. All classes were tape-recorded for teacher evaluation.
Week III

Right Hand Skills

1. Bow Hold

2. Bowing from lower arm

3. Flexible bow hold

Sample Teaching Devices

1. Hold bow horizontally left hand, place right hand in proper bow hold, tap each finger.

2. Shoulder bowing

3. Stir the pot

4. Rocket blast off

5. Elevator game

6. Bow quarter notes on D

Left Hand Skills

1. Instrument Hold

2. Left Hand Shape

3. "Hot Cross Buns"

4. "Mary Had a Little Lamb."

Sample Teaching Devices

1. Numbers game

2. Shuttle Game (Rolland)

3. Pluck "Hot Cross Buns" in playing position.

4. Sing fingerings to "Mary Had a Little Lamb."

Ear Training Skills

1. Match different rhythms, three and four note patterns.

2. Match pitches in three and four note patterns; some repeated notes, no skips.

Sample Teaching Devices

1. Match open string repeated notes played on simple rhythm patterns of ♪ and ♩ ♩ ♩ ♩ notes played pizzicato.

2. Match a four note pattern using some fingered notes on the D string played pizzicato ♩ ♩ ♩ ♩ .

Classes were tape-recorded during the third week of instruction.
Week IV

### Right Hand Skills

1. Bow Hold
2. Flexible bow hold
3. Bowing from lower arm
4. String crossings

### Sample Teaching Devices

1. Tap each finger
2. Push and pull
3. Shoulder bowing
4. Bow various simple rhythms on open strings such as \[ \text{\textbullet\textbullet\textbullet\textbullet} \]
5. Bow on open strings, \[ \text{\textbullet\textbullet\textbullet\textbullet} \]; stop, raise or lower arm to place bow on new string.

### Left Hand Skills

1. Left Hand Shape
2. "Hot Cross Buns"
3. "Mary Had a Little Lamb"

### Sample Teaching Devices

1. Tunnel pizzicato
2. Sing fingerings to "Hot Cross Buns" and pluck on instrument.
3. Sing fingerings to "Mary" and pluck on instrument.

### Ear Training Skills

1. Match four note patterns with some repeated notes.

### Sample Teaching Devices

1. Match repeated open string pitches in four note patterns of \( \text{\textbullet}, \text{\textbullet\textbullet} \), and \( \text{\textbullet\textbullet\textbullet} \) notes, pizzicato.
2. Match four note patterns of \( \text{\textbullet}, \text{\textbullet\textbullet} \), and \( \text{\textbullet\textbullet\textbullet} \), using some fingered notes on the D string, pizzicato.

String class A was videotaped during lesson eight of the fourth week of instruction. Students in classes B, C,
and D were given skill tests which were recorded on skill test charts. One student was dropped from string class A for consistently unacceptable social behavior.

**Week V**

**Right Hand Skills**

1. Bow Hold
   - Student places bow on string, teacher checks bow hold.

2. Bow parallel to bridge
   - Rocking: Place bow on string, pivot bow between bridge and fingerboard. Stop where bow is parallel to bridge.

3. String crossings
   - Bow four quarter notes on each string, stop bow; lower or raise arm to next string.

**Left Hand Skills**

1. Instrument hold
   - Student-lead numbers game

2. Left hand shape
   - Play "Hot Cross Buns." with bow.

3. Sample Teaching Devices
   - Play "Hot Cross Buns" with bow.
   - Pluck "Mary Had a Little Lamb."

**Ear Training Skills**

1. Match four note patterns with no skips and some repeated notes.
   - Match repeated open string pitches in four note patterns of ♩, ♪, ♪, and ♩ notes, pizzicato.

2. Match four note patterns of ♩, ♪, and ♪ notes using some fingered notes on the
String class A was videotaped during week five, lesson nine. Classes A, B, and C received two skills tests, and class D received one.

**Week VI**

**Right Hand Skills**

1. Bow hold
2. Bow parallel to bridge
3. String crossings
4. Bowing various rhythms

**Left Hand Skills**

1. Left Hand Shape

All music has been learned by singing melodies and fingerings and reading line notation. Starting in the seventh week, each student received a booklet of melodies in standard notation with color-coded fingerings underneath the notes.

**Ear Training Skills**

1. Match four note patterns with one skip and some repeated notes.

**Sample Teaching Devices**

1. Lift and set, frog, middle, tip.
2. Rocking game.
3. Roll the bow: roll the bow silently across the strings by raising and lowering right elbow.
4. Bow on each open string.
5. Bow on the D string while the teacher plays "Twinkle Twinkle Little Star."

**Sample Teaching Devices**

1. Play "Hot Cross Buns" and "Mary" - pizzicato.
2. Play "Hot Cross Buns" with bow.

1. Match a four note pattern of ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ ♩ notes played on two adjacent open strings, arco!
2. Match four note patterns of open string repeated notes.

String classes A, C, and D were given one skill test during the sixth week, and class B was given two. No videotaping was done, but class B was observed by a music education expert. One student was dropped from class D for consistently unacceptable social behavior.

Week VII

Right Hand Skills

1. Bow hold

2. Bow parallel to bridge

3. String crossings

4. Bowing in lower or middle bow

Left Hand Skills

1. Left hand shape

Students began using musical notation booklets for melodies learned. Notes had color-coded fingerings underneath them.

Ear Training Skills

1. Match a four note pattern with one skip and some

Sample Teaching Devices

1. Lift and set bow on string, teacher checks bow hold.

2. Rocking game

3. Roll the bow.

4. on all strings

Sample Teaching Devices

1. Swing elbow, stop at proper placement.

2. Flex wrist, stop at proper placement.

3. Review "Mary" and "Hot Cross Buns," arco.

4. Sing "Who's That Tapping at My Window" with words and fingerings.

5. Pluck "Who's That Tapping."

Sample Teaching Devices

1. Match a four note pattern of , , ,
repeated notes.  

2. Match a four note pattern of $\ddot{g}$, $\dddot{g}$, $\dddot{g}$, and $\ddot{g}$ notes on the D string using some fingered notes-arco.

Students in class A were given a skills test during lesson thirteen.

**Week VIII**

**Right Hand Skills**

1. Bow hold

2. Bow parallel to bridge

3. String crossings

4. Flexible bow change

5. Bowing in middle and lower half of bow

**Left Hand Skills**

1. Left hand frame

**Ear Training Skills**

1. Match a five note pattern with one skip and some repeated notes.

**Sample Teaching Devices**

1. Put fingers on bow, turn bow over to see if thumb is curved.

2. Rocking game

3. Play four quarter notes on each string; stop roll bow to next string, then play.

4. Push and pull.

5. $\dddot{g} \dddot{g} \dddot{g} \dddot{g}$ on all strings

**Sample Teaching Device**

1. Shuttle

2. Tunnel pizzicato


**Sample Teaching Devices**

1. Match a five note pattern of $\ddot{g}$, $\dddot{g}$, $\ddot{g}$, and $\dddot{g}$ on two adjacent open strings-arco.
2. Match a five note pattern of $\underline{\text{d, d, d,}}$, or $\underline{\text{d, d,}}$ on the D and A strings with some fingered notes-arco.

String classes C and D were videotaped during lesson sixteen.

Week IX

Right Hand Skills

1. Bow hold

2. Bow parallel to bridge

3. Bowing in middle, frog, and tip of bow

4. String Crossings

Sample Teaching Devices

1. Lift and set, frog, middle, tip.

2. Rocking game

3. $\frac{\text{d}}{\text{d}}$ on all strings

4. Four quarter notes on each string, stop and roll the bow to next string

Left Hand Skills

1. Left hand shape

Sample Teaching Devices

1. Tunnel pizzicato

2. Swing elbow, stop at proper placement.

3. Shuttle


5. Sing words and fingerings to "Au Claire de la Lune."

Ear Training Skills

1. Match a five or six note pattern with one skip and some repeated notes.

Sample Teaching Devices

1. Match a six note pattern of $d'$, $d$, $d''$, or $d'''$ on two adjacent open strings, arco.

2. Match a five note pattern of $d'$, $d$, $d''$, or $d'$, notes on the D or A strings with some fingered notes, arco.

Classes B, C, and D were videotaped during lesson eighteen.

Week X

Right Hand Skills

1. Bow Hold
2. Flexible direction changes
3. Bowing at frog, middle, tip.
4. Bowing with whole bow

Left Hand Skills

1. Left hand shape
2. Wrist and elbow placement

Sample Teaching Devices

1. Lift and set
2. Elevator game
3. $\begin{matrix} \text{all open strings} \\ \text{strings} \end{matrix}$
4. Short, short, long, $\downarrow \uparrow \downarrow$

Sample Teaching Devices

1. Shuttle
2. Flex and straighten wrist to proper position.
3. Swing elbow, stop at proper position.
4. Review all four songs, pizzicato and arco.
Ear Training Skills

1. Match a six note pattern with one or more skips and some repeated notes.

Sample Teaching Devices

1. Match a six note melodic fragment of ♦, ♦, and ♦ ♦ notes on two adjacent open strings.

2. Match a six note melodic fragment of ♦, ♦, and ♦ ♦ notes on one string with some fingered notes.

Classes B and D performed skills tests during lesson twenty. Class A was observed by a special music education expert, and classes C and D were videotaped.

Week XI

Lesson 21

Right Hand Skills

1. Flexible bow change

2. Bowing on open strings at the frog, middle and tip

Left Hand Skills

1. Left Hand Shape

Sample Teaching Devices

1. Elevator game

2. Spider crawl

3. Stir the pot

4. ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ frog, middle tip

5. ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦ &n...
Ear Training Skills

1. Match a six or seven note pattern with some repeated notes and one skip.

Sample Teaching Devices

1. Match a seven note melodic fragment of d, j, or # notes played on two adjacent open strings.

2. Match a seven note melodic fragment of d, j, or # played on one string with fingered notes.

Week XI
Lesson 22

Videotaping of individual and group performances to be sent to the string education experts.

1. Content of individual videotaped performances
   a. Body posture and instrument hold
   b. Open string bowings on J J J J J J and E E E E E E
   d. Ear Training: Two five note examples using j and # notes:
      1. Example one was on two adjacent open strings (D and A).
      2. Example two was on the D string and contained some fingered notes (E and F#).
2. **Content of group videotaped performances:**
   a. Open string bowing on the rhythms \(\frac{1}{4}\) \(\frac{1}{4}\) \(\frac{1}{4}\) \(\frac{1}{4}\) \(\frac{1}{4}\) and \(\frac{1}{2}\) \(\frac{1}{2}\)

**Week XII**

**Lesson 23** was the same as lesson 21

**Lesson 24:** Concert/Demonstration at each school

1. **Audience:** The special education class, special education teacher, school administrators, and music teacher.

2. **Concert/Demonstration**
   a. The special education string teacher introduced the stringed instruments and demonstrated the range and sound of each one.

   b. Each class demonstrated or participated in:

   1. **Left Hand Skills**
      a. Correct body posture and instrument hold
      b. Proper left hand shape

   2. **Right Hand Skills**
      a. Bow hold
      b. Bowing in middle or lower half of bow
      c. String Crossings

   **Teaching Devices**
   1. Numbers game
   2. Tapping on each string
   3. Tunnel pizzicato
   4. "Hot Cross Buns," pizzicato
   1. Rabbit, telescope
   2. Shoulder bowing
   3. Four quarter notes on each string
   4. Four quarter notes on each open string, stop, roll bow to check arm levels
3. **Group Performance Pieces**

   a. Class played \( \frac{4}{4} \) \( \frac{4}{4} \) on the D string, while the teacher played "Twinkle Twinkle Little Star" on the same rhythm.

   b. Class played "Hot Cross Buns," "Mary Had a Little Lamb," "Who's That Taping at My Window," and "Au Claire de la Lune." The teacher played an introduction to each song, and performed with the MMH string players.

4. **Awards and Refreshments:** Each student received:

   a. A framed certificate called the String Music Achievement Award signed by the special education string teacher

   b. A music achievement lapel pin

   c. Cookies and napkins with musical designs

5. **Administration of the String Music Attitude Inventory for Special Students.**

   c. Ear training was omitted from the demonstration because students were too fearful to perform individually. The classes were not able to match pitches as a group at this time.

---

**Sample Lesson Plan**

Class Beginning Strings Lesson Number 1 Date ________

**Objectives:** The student will:

1. Practice auditory, visual, language, motor, and social skills.

2. Demonstrate proper bow hold.

3. Demonstrate proper body posture and instrument hold.

4. Name parts of the instrument.

5. Match simple rhythms by plucking on an open string.

6. Sing "Hot Cross Buns" with words.
Procedures:

1. Getting acquainted: Teacher and student will exchange information about their musical experiences and life experiences.

2. Teacher will demonstrate proper care of instruments and name parts of instruments.
   a. Students will name parts of instruments.

3. **Right Hand Skills**
   a. Bow hold
      1. Teacher will model all steps.
      2. Form a telescope with thumb and first joint of middle finger. Look through telescope.
      3. Place a pencil in the telescope, drape fingers over pencil in proper bow hold position. Tap each finger against pencil.
      4. Repeat procedures with bow.

4. **Left Hand Skills**
   a. Body Posture
      1. Teacher will model all steps and adjust student positions.
      2. Grow an inch: lengthen body.
   b. Instrument Playing Position
      3. Numbers game
      5. Cello: Give cello a bear hug for instrument position.
5. **Ear Training Skills**

   **Teaching Devices**

   a. Match various simple rhythms.

   1. Students will echo clap various simple rhythms such as \(\text{\texttt{\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}}} \), \(\text{\texttt{\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbackslash{}\textbac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2. **Left Hand Skills**
   a. Review parts of instrument.
   b. Body posture
   c. Instrument hold

3. **Ear Training Skills**
   a. Match a pitch
   b. Sing "Hot Cross Buns" with words and fingerings.

### Teaching Devices

1. Students will name parts of instrument.
2. Teacher will model all steps and adjust student positions.
3. Pull string through center of body to lengthen it.
4. Casewalk (violin/viola)
5. Numbers game
6. Student lead numbers game

1. Students will match open string pitches plucked in half notes.
2. Teacher and students will sing "Hot Cross Buns."
3. Teacher will sing "Hot Cross Buns" with fingerings.
4. Students will sing "Hot Cross Buns" with fingerings.
Student Evaluation

During the first three weeks of instruction, students received verbal comments concerning evaluation of their string skill performance. The evaluation consisted of positive comments and facial expressions where appropriate, with suggestions for correcting deficient skills. The correction was reinforced by teacher modeling and physically assisting student performance.

This type of student reinforcement appeared to be insufficient to maintain student interest and enthusiasm. During the fourth week of instruction, the researcher began using charts with student names and string skills listed to evaluate students, in addition to the previously mentioned methods (See schedule, Appendix F). Each student received a "grade" for every skill tested: ✓+ = very good, ✓ = good, ✓− = improving slowly, and ✓−− = improvement needed (See Charts, Appendix G). Students with ✓+ s and ✓ s received two pieces of candy as an extra reward.

Students were graded as they reached certain skill levels. Information from the charts is easily transferred to student evaluation forms to be placed in student files (See Appendix H).

Teacher Evaluation

The researcher evaluated her string class teaching by tape-recording and videotaping classes. (See schedule,
Appendix I). The four main areas evaluated were lesson structure, musical knowledge and skills, delivery, and classroom management. The teacher listened to or viewed the tapes and wrote comments on ways to improve the four areas mentioned. Student skills that needed attention were noted as well as suggestions for improving videotaping techniques. The teacher evaluation form designed for the curriculum was used on several occasions to evaluate videotapes. (See Appendix J).
CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The first major question of this study concerned the development and evaluation of a string music curriculum for mentally handicapped students. The curriculum was evaluated by a panel of five judges with expertise in string education, special education, and music for handicapped learners. The judges evaluated the curriculum by using the researcher-designed String Music Curriculum Evaluation Form.

The average judges' scores for each section of the curriculum were compared with the criterion score of 2 (acceptable) to determine if the curriculum was appropriate for mentally handicapped students. After the first evaluation, the curriculum was revised to include the recommendations of the experts, then re-evaluated.

In the process of developing and evaluating the curriculum, sub-purpose questions one through seven concerning philosophy, goals, objectives, sequence of instruction, student competencies, teaching methodologies, music, materials, and lesson plans were addressed. Each
question was then compared to its related portion of the curriculum and evaluated by judges' scores and recommendations.

The second major question of the study addressed student string skill levels and attitudes toward string class as they relate to the feasibility of a string program for the mentally handicapped. Student string skills were evaluated by the researcher and others through daily observation and by the panel of string education judges using the researcher-designed Performance Evaluation Form. Student string skill scores on the Performance Evaluation Form were compared to scores in the "acceptable" range to determine student skill level. Judges' opinions about the feasibility of string classes for the mentally handicapped were reported.

Data pertaining to student attitudes was obtained by daily observation and student scores on the researcher-designed String Music Attitude Inventory for Special Students. Student attitude scores were compared to a criterion score of 19 to determine what portion of the students found string class enjoyable. Kendall's Tau statistical test (Hollander & Wolfe, 1973) was used to compare attitude with age, grade level, and string skill scores to determine a possible relationship.

Sub-purpose questions eight and nine inquired about possible relationships between I.Q. and string skills, I.Q.
and muscular coordination, and social skills and string skills. Kendall's Tau was used to test these relationships.

Sub-purpose question 10, pertaining to the comparison of anticipated skill level and actual skill level achieved, was analyzed in terms of researcher observation.

The third major question of the study investigated the type of class setting that is most appropriate for MMH students, homogeneous or heterogeneous. The Wilcoxon Two-Sample Test (Hollander & Wolfe, 1973) was used to compare homogeneous and heterogeneous classes on the variables I.Q., Social Quotient (S.Q.), attitude, and string skills. Judges' opinions of which class setting is most appropriate for student progress were reported. A criterion level of .05 was established for all statistical tests of significance.

This chapter will discuss the results of the data analysis in three parts: 1. question one and sub-purpose questions one through seven, 2. question two and sub-purpose questions eight through ten, and 3. question three.
Question 1

Is the curriculum content pedagogically accurate and appropriate for mildly mentally handicapped students?

To determine the answer to question 1, five judges evaluated the curriculum using the Curriculum Evaluation Form. There were four possible answers for each item: 0. unacceptable, 1. needs revision, 2. acceptable, and 3. excellent. Table 1 presents individual judges' scores and an average of judges' scores on each item of the curriculum for the first curriculum evaluation.

The expected minimum average judges' score for each item was 2 (acceptable). Twenty-three of the 30 items evaluated received an average score of 2 or better. Seven items had an average score of less than 2 which initiated a decision to revise the curriculum. Course objectives, Right Hand Skills, Left Hand Skills in the first level of instruction and Right Hand Skills, Left Hand Skills, Ear Training Skills and Note Reading Skills in the second level of instruction received a rating of less than 2.

Table 2 presents mean total scores for each judge on the first curriculum evaluation. Four of the five judges had a mean total score in the range of 2.10 to 2.96. The standard deviations were similar for three out of five judges.
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**Judges' Scores and Average Judges' Scores for the First Curriculum Evaluation**

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Table 2

Mean Total Judges' Scores and Standard Deviations for the First Curriculum Evaluation

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Judges' Recommendations for Revision of Unacceptable Items in First Level of Instruction

Course Objectives. One string education expert stated that the F and A scales should be omitted from the beginning level of instruction in the heterogeneous classes because of the difficulty of fingerings for cello and bass. Note reading should be delayed until right and left hand basic technique is secure.

The special education teacher commented that objectives 4, 10, and 11 concerning ear training, playing from musical notation, and sightreading from musical notation were too difficult for mentally handicapped children.
Another string education expert expressed a concern about the difficulty of sightreading from musical notation for mentally handicapped children.

Ear training was included in the revised curriculum because it appeared to the researcher that some mentally handicapped students had an acceptable degree of success in this area. Note reading was also included in the revised curriculum because students expressed an interest in learning to read from musical notation and because other educators have taught mentally handicapped students to read rhythms and music from standard notation (Buker, 1966; Williams, 1978).

**Right Hand Skills.** One string education expert recommended that the use of the whole bow should be avoided until the upper 2/3 is well controlled for the upper strings (violin and viola), and the lower 2/3 is well controlled for the lower strings (cello and bass). The whole bow usage should perhaps be postponed until the second year of instruction.

Another string education expert stated that the right hand skills needed to be broken down into smaller steps. For example, the section on bow hold should include each step necessary to form a proper bow hold in addition to teaching devices.

**Left Hand Skills.** One string education expert recommended that left hand skills be broken down into
smaller increments. For example, the section on body posture should list each component of appropriate body posture for upper and lower strings as well as teaching devices.

Second Level of Instruction

**Right Hand Skills, Left Hand Skills, Ear Training, and Note Reading.** One string education expert recommended that shifting movements start much earlier than listed in the curriculum. These movements would benefit the beginner in ways such as security in holding the instrument, and avoiding the squeezing tendency as the player explores the fingerboard without pitch problems.

Another string education expert stated that the goals for each skill area were too advanced and needed more pre-requisite skills to advance from level to level. The second level of instruction was deleted from the revised curriculum due to lack of information concerning student expectations and in order to more thoroughly develop the first level of instruction.

**Implementation**

The implementation section received acceptable average scores on all items. This section was revised for the final draft of the curriculum in order to accommodate the excellent recommendations of the experts. The components of task analysis were discussed to further aid the teacher in breaking down skills into manageable steps. Other
sections were expanded as a result of the twelve weeks of instruction.

Revised Curriculum Data

Table 3 presents judges' scores on each item of the second curriculum evaluation and the average of judges' scores for each item. Each item of the revised curriculum received an average score of two or better. Five of the 21 items received an average rating of 2 (acceptable) and 16 items received an average score in the range of 2.2 to 2.8. The goal of an average judges' score of 2 or better was achieved for each section of the curriculum.

Table 4 presents mean total scores for each judge on the final curriculum evaluation. Four of the five judges had a mean total score between 2.14 and 3.0. The mean total score for four out of five judges increased as compared to the judges' mean total scores on the first curriculum evaluation. Standard deviations were similar for three of the five judges.

Discussion of Sub-purpose Questions One Through Seven and Judges' Recommendations on the Second Curriculum Evaluation

Several questions were addressed in the process of creating and evaluating the String Music Curriculum for Mildly Mentally Handicapped Middle School Students. Each
Table 3
Judges' Scores and Average Judges' Scores for the Second Curriculum Evaluation

<table>
<thead>
<tr>
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<td>Student Evaluation</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>Musical Events</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Social Events</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Characteristics of MMH</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Learning Tasks for MMH</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.4</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>J1</th>
<th>J2</th>
<th>J3</th>
<th>J4</th>
<th>J5</th>
<th>Av. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Competencies</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Lesson Planning</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>2.0</td>
</tr>
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<td>Music Materials</td>
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<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Sample Lesson Plans</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>Student Evaluation</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Teacher Evaluation</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Table 4

Mean Total Judges' Scores and Standard Deviations for the Second Curriculum Evaluation

<table>
<thead>
<tr>
<th>Judge</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td>21</td>
<td>3.00</td>
<td>0.00</td>
</tr>
<tr>
<td>J2</td>
<td>21</td>
<td>2.14</td>
<td>0.57</td>
</tr>
<tr>
<td>J3</td>
<td>21</td>
<td>1.14</td>
<td>1.06</td>
</tr>
<tr>
<td>J4</td>
<td>21</td>
<td>2.66</td>
<td>0.58</td>
</tr>
<tr>
<td>J5</td>
<td>21</td>
<td>2.71</td>
<td>0.46</td>
</tr>
</tbody>
</table>

question is stated below and discussed in relation to the curriculum.

Sub-purpose question 1

What constitutes the foundation of a string music curriculum for the MMH student?

This question pertained to the development of a philosophy of string music education for mentally handicapped students. The philosophy section of the curriculum received an average judges' score of 2 (acceptable) on the final curriculum evaluation. One judge stated that the question of feasibility of a string program for MMH students could be explored more completely in the philosophy section.
Sub-purpose question 2

What are the goals and objectives of the course of study?

Three sections of the String Music Curriculum for MMH Students addressed this question: 1. The Goals of a String Program for MMH Students, 2. Program Structure and 3. Course Objectives. These sections received an average judges' rating in the range of 2.4 to 2.6 on the second curriculum evaluation. Concerning course objectives, one judge stated that video tapes and films of appropriate string playing should be viewed by students in addition to teacher modeling and student practice with cassette tapes. The films would help prevent poor playing habits.

Sub-purpose question 3

What sequence of instruction is appropriate for MMH students?

This question is addressed in the remaining sections of the first level of instruction: 1. Right Hand Skills, 2. Left Hand Skills, 3. Ear Training Skills, 4. Note Reading Skills, 5. Student Evaluation, 6. Musical Events and 7. Social Events. Each of the first four sections gives a step-by-step sequence of skills to be learned and teaching devices for each skill. The student evaluation form lists technical, musical, and classroom skills that will be evaluated for each student. Musical and social events sections present suggested concert performances and
social events for the first level of instruction.

This part of the curriculum received average judges' scores in the range of 2.2 to 2.6. String education experts had several comments and recommendations concerning the first four sections.

**Right hand skills and left hand skills.** One expert stated that the German bow hold was omitted for bass players and that use of the whole bow proceeded too quickly in the sequence of instruction. The use of the shoulder pad should be discussed especially when holding the instrument (violin, viola) with the chin and shoulder as in the numbers game.

**Ear training skills and note reading.** One judge stated that the sequence of ear training examples for item number 5, ability to play major and minor tetrachords by ear, would be more appropriate if example 3 followed example 1, then 2, and 4. Another expert stated that note reading presents many problems that are developmental. This section needs to be expanded to accommodate the developmental problems of MMH students or perhaps eliminated from the first level of instruction.

**Student evaluation form.** Three judges stated that the student evaluation form listed after note reading in the curriculum, should be adapted to the special needs of the MMH student (See Appendix B, p.161). Items such as tuning and note reading should perhaps be deleted from the
beginning level evaluation form. This student evaluation form was eliminated from the present edition of the curriculum.

**Sub-purpose question 4**

What competencies should the students be able to demonstrate at each level?

The first edition of the String Music Curriculum for MMH Students had two levels of instruction, beginning strings class and intermediate strings class. After the first curriculum evaluation and the 12 weeks of instruction, the researcher decided it would be more beneficial to expand and modify the beginning level of instruction rather than to include a second level with arbitrary string skill levels. Competencies for the beginning level of instruction are found under Course Objectives which received an average judges' score of 2.6 on the second curriculum evaluation.

**Sub-purpose question 5**

What teaching methodologies are appropriate for MMH students?

The first four parts of the implementation section of the curriculum, 1. introduction, 2. characteristics of MMH students, 3. learning tasks for MMH students, and 4. teacher competencies addressed question five. These categories received an average score in the range of 2.2 to 2.4. One judge stated that the possibility of visual aids
such as teaching films needed to be addressed in the task analysis section. Another judge stated that the skills listed in the curriculum should have been broken down into smaller increments in the task analysis section.

Sub-purpose question 6

What materials are appropriate for each level of instruction?

The music and materials portions of the implementation section of the curriculum addressed this question. The characteristics of appropriate music, sources of music, and specific music selections are listed under music. The materials portion contains suggestions for a beginning instruction booklet and other materials needed to enhance music reading and intonation. These categories received an average rating of 2.2. There were no recommendations for changes.

Sub-purpose question 7

What lesson plans are appropriate for each level of instruction?

The six sample lesson plans in the implementation section of the curriculum addressed this question. The lesson plans received an average rating of 2 (acceptable). Two experts stated that the sample lesson plans appeared to move too fast for thorough teaching and skill acquisition.
QUESTION TWO AND SUB-PURPOSE QUESTIONS 8 THROUGH 10

Question 2

Did student skill levels and attitudes towards string class indicate the feasibility of string classes for the mentally handicapped?

Student skill levels were evaluated in four ways:

1. Daily observation and evaluation by the researcher, 2. Occasional observation and evaluation by individual members of the dissertation committee, 3. String education experts' scores for each student on the Performance Evaluation Form and 4. The string education experts' answers to question 1 of the Questionnaire for Experts.

String Skill Evaluations

Evaluation 1

The researcher observed that the students improved their string skills from lesson to lesson and appeared to enjoy string class. They were able to present a successful concert-demonstration of skills and melodies learned to their classmates at the end of the twelve weeks of instruction.

Evaluation 2

Dissertation committee members who observed the special string classes were enthusiastic about the students' efforts and accomplishments. They suggested methods of rewarding students for their progress.
Evaluation 3

The Performance Evaluation Form had three sections:
1. the technique section which contained 9 items, 2. the music section which contained 28 items, and 3. the ear training section which contained 8 items. Each item of the technique section had a possible score of 1-5. Each item of the music and ear training sections had a possible score of 1-4.

The three string education experts evaluated each student's string skills in the areas of technique, music performance, and ear training, using the Performance Evaluation Form. To determine if the judges were using similar criteria to evaluate the students, the judges' scores were correlated by the use of Kendall's Tau Statistical Test. The significance level was established at .05 for each case.

Table 5 presents the correlation between judges' scores for the areas of technique, music, ear training, and total skill score. In the area of technique it can be seen that there is a high correlation between judge one and judge three. The music section of table 5 shows a significant correlation between judges one and two. There is a very high correlation between judges one and three, and judges two and three.

The ear training data in table 5 reveals a high correlation between judge one and judge two. The total
Table 5
Kendall's Tau Correlation of Judges' Scores for Each Student on the Performance Evaluation Form

<table>
<thead>
<tr>
<th>Correlation Between</th>
<th>Tau</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technique</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1 vs J2</td>
<td>.25</td>
<td>.13</td>
</tr>
<tr>
<td>J1 vs J3</td>
<td>.43</td>
<td>.01</td>
</tr>
<tr>
<td>J2 vs J3</td>
<td>.28</td>
<td>.09</td>
</tr>
<tr>
<td><strong>Music</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1 vs J2</td>
<td>.31</td>
<td>.05</td>
</tr>
<tr>
<td>J1 vs J3</td>
<td>.36</td>
<td>.02</td>
</tr>
<tr>
<td>J2 vs J3</td>
<td>.49</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Ear Training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1 vs J2</td>
<td>.42</td>
<td>.01</td>
</tr>
<tr>
<td>J1 vs J3</td>
<td>.20</td>
<td>.23</td>
</tr>
<tr>
<td>J2 vs J3</td>
<td>.21</td>
<td>.19</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1 vs J2</td>
<td>.29</td>
<td>.06</td>
</tr>
<tr>
<td>J1 vs J3</td>
<td>.30</td>
<td>.05</td>
</tr>
<tr>
<td>J2 vs J3</td>
<td>.42</td>
<td>.01</td>
</tr>
</tbody>
</table>
scores section shows a significant correlation between judges one and three and judges two and three, with a marginal correlation between judges one and two. Again, there is a high correlation between judges two and three. The number of significant correlations between judges' scores shown in table 5 seems to indicate that the judges were using similar criteria to evaluate student skills.

It is difficult to compare the string skill scores of MMH students to expected skill scores because of lack of data concerning the string instrument playing ability of MMH students.

Assuming that the judges were using similar criteria to evaluate the students, the MMH student string skill scores were compared to scores in the acceptable range of the Performance Evaluation Form to give a better perspective of the achievement level of the MMH students as perceived by the experts.

Table 6 presents the range, mean, and percentage scores for MMH student string skills as well as raw scores and percentage scores in the acceptable range. Each area, technique, music, ear training, and total score has a similar range of scores. The data shows that ear training scores were the highest skill scores. The mean ear training score was only one point or 2% below a perfect score in the acceptable range. Students were allowed more than one try for ear training examples which may partly
Table 6

**Range, Mean, and Percentage String Skill Scores for MMH Students Compared to "Acceptable" Raw Scores and Percentage Scores**

<table>
<thead>
<tr>
<th>Skill</th>
<th>MMH Student Scores</th>
<th>Acceptable Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Technique</td>
<td>17-31</td>
<td>25</td>
</tr>
<tr>
<td>Music</td>
<td>49-89</td>
<td>73</td>
</tr>
<tr>
<td>Ear Training</td>
<td>15-32</td>
<td>23</td>
</tr>
<tr>
<td>Total Skill Score</td>
<td>90-139</td>
<td>121</td>
</tr>
</tbody>
</table>

**Table 6 Explanation**

The mean technique score of 25 or 55% of the total possible technique score is not as low as it appears to be. The possible score for each item in the technique section of the Performance-Evaluation Form was from 1-5, with 3 as an acceptable score. An acceptable total score for the technique section was 27 or 60% of the total possible technique score. Therefore, the mean technique score for MMH students was only two points below the acceptable range. The possible score for each item in the music section of the Performance Evaluation Form was 1-4, with 3 as an acceptable score. The MMH students' mean music score
of 73 or 65% of the total score was nine points or 10% below an acceptable score of 75%. Therefore, the greatest skill achievement was first in ear training, then technique, total skill score, and music respectively.

The string skill scores for MMH students show a level of string skill achievement that is somewhat below what one might expect for normal children. A total skill score in the "acceptable" range for the Performance Evaluation Form would be 135 or 71% of the total score. The fact that the mentally handicapped students did achieve a total score of 64% indicates to this researcher that string skill achievement is possible for MMH students and that string classes for mentally handicapped students are feasible.

Evaluation 4

The three string education judges viewed two video tapes in order to evaluate student string skills. One tape contained the individual playing skills of each student and the other tape included class lessons for homogeneous and heterogeneous classes. Question number one on the Questionnaire for Experts asked the experts to state their opinions on the feasibility of string classes for mentally handicapped students on the basis of information gained by viewing the two video tapes. Every expert agreed that string classes for mentally handicapped students are feasible.
Student Attitudes

Student attitudes were measured by daily observation of student behavior and by the String Music Attitude Inventory for Special Students.

The researcher noted that student attitudes and behavior were generally acceptable to good throughout the twelve weeks of instruction. Class A, the sixth grade heterogeneous class, was more easily distracted than the other classes. Their attention spans seemed shorter, especially at first, and they had difficulty concentrating on class activities.

After the skills charts and rewards were implemented, their efforts appeared to increase. At the end of the twelve weeks of instruction, their effort and achievement level had surpassed some of the older students. One student was expelled from this class because of constant talking, negative attitudes, and lack of effort. His student file showed some behavior problems in the special classroom and some difficulty in getting along with peers.

Class B, the seventh and eighth grade heterogeneous class, was more calm. The students made progress in playing their instruments and had no unacceptable behavior. In general their attitudes and enthusiasm seemed to be less positive than class A so that it was more difficult for the teacher to motivate them.
Class C, a seventh and eighth grade homogeneous class, had the most acceptable behavior. Their attitudes were mature, friendly, and enthusiastic. There were no major behavior problems throughout the twelve weeks of instruction.

Class D, a seventh and eighth grade homogeneous class, had some behavior problems. On one occasion, a student frustrated over inability to play an ear training example, became very angry and had to be sent to the principal's office. This student had a complete change in attitude as the class progressed and became a model student. Another student in Class D became increasingly frustrated because of difficulty playing the pieces. The frustration was shown in anger and negative attitudes. The researcher and special education teacher decided it was best for this student to drop the class. The other students in Class D had acceptable behavior. Some were enthusiastic and all students made some progress.

The String Music Attitude Inventory consisted of 12 positive statements about string class with three possible responses to each statement: 1. agree, 2. not sure, 3. disagree. Eighteen students took the attitude inventory, four were absent. The total possible score on the inventory was 24.

Table 7 presents individual student scores, class average scores and the average total score for attitude.
### Table 7

**Individual Student Scores and Class Average Scores on the String Music Attitude Inventory for Special Students**

<table>
<thead>
<tr>
<th>Students</th>
<th>Individual Scores</th>
<th>Class Av. Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>23</td>
<td>Class A - 22.3</td>
</tr>
<tr>
<td>A-2</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>A-4</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>B-1</td>
<td>21</td>
<td>Class B - 19.2</td>
</tr>
<tr>
<td>B-2</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>B-3</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>B-4</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>B-5</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>B-6</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>C-2</td>
<td>13</td>
<td>Class C - 20.0</td>
</tr>
<tr>
<td>C-4</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>C-5</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>C-6</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
Table 7 (continued)

<table>
<thead>
<tr>
<th>Students</th>
<th>Individual Scores</th>
<th>Class Av. Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1</td>
<td>22</td>
<td>Class D - 20</td>
</tr>
<tr>
<td>D-2</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>D-3</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>D-4</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>D-5</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Average Total Score = 20
A score of 19 was considered to be an acceptable positive attitude score. All classes had a score in the range of 19.2 to 22.3. The average total score for all classes was 20. Seventy-eight percent of the students had a score of 19 or better on the String Music Attitude Inventory. Grade level, age, and string skill scores were correlated with attitude to investigate a possible relationship. There was no significant correlation between age and attitude. There was a marginal negative correlation between attitude and grade level. There was no significant correlation between attitude and string skills.

Student behavior and attitudes toward string class seem to indicate the feasibility of string classes for mildly mentally handicapped students.

Sub-Purpose Questions 8-10

Sub-Purpose Question 8

Are there relationships between I.Q. and string skill level; I.Q. and muscular coordination; muscular coordination and string skill achievement?

To determine the relationship between string skills and I.Q., Kendall's Tau was used to correlate string skill scores and I.Q. scores. Table 8 indicates that the test showed no significant correlation between I.Q. and technique, music, ear training, or total skill scores. Comparisons between muscular coordination and I.Q., and
Table 8

**Kendall's Tau Correlation of String Skills, I.Q., Social Quotient (S.Q.), Grade and Age**

<table>
<thead>
<tr>
<th>Correlation Between</th>
<th>Tau</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique vs I.Q.</td>
<td>.02</td>
<td>.89</td>
</tr>
<tr>
<td>S.Q.</td>
<td>.13</td>
<td>.39</td>
</tr>
<tr>
<td>Age</td>
<td>.04</td>
<td>.84</td>
</tr>
<tr>
<td>Grade</td>
<td>.10</td>
<td>.56</td>
</tr>
<tr>
<td>Music vs I.Q.</td>
<td>-.16</td>
<td>.31</td>
</tr>
<tr>
<td>S.Q.</td>
<td>-.04</td>
<td>.80</td>
</tr>
<tr>
<td>Age</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Grade</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Ear Training vs I.Q.</td>
<td>.10</td>
<td>.51</td>
</tr>
<tr>
<td>S.Q.</td>
<td>.22</td>
<td>.16</td>
</tr>
<tr>
<td>Age</td>
<td>.03</td>
<td>.88</td>
</tr>
<tr>
<td>Grade</td>
<td>.13</td>
<td>.44</td>
</tr>
<tr>
<td>Total Score vs I.Q.</td>
<td>-.07</td>
<td>.67</td>
</tr>
<tr>
<td>S.Q.</td>
<td>.09</td>
<td>.57</td>
</tr>
<tr>
<td>Age</td>
<td>-.02</td>
<td>.88</td>
</tr>
<tr>
<td>Grade</td>
<td>.04</td>
<td>.05</td>
</tr>
</tbody>
</table>
muscular coordination and string skills were not made because of insufficient data on muscular coordination for each student.

**Sub-Purpose Question 9**

Is there a relationship between social skills and string skills?

Social skills were measured by the Vineland Social Maturity Scale. It is a subjective test in which "an observer-usually a parent-reports on the child's ability to carry out a variety of self-care, language, and social activities" (Suran and Rizzo, 1983, p. 120). The observer rates the intensity or frequency of the behavior. The rating is expressed as a number called social quotient, (S.Q.).

Social skills and string skills were compared using Kendall's Tau correlation. Table 8 indicates that there was no significant correlation between social quotient scores and technique, music, ear training, or total skill scores.

Student ages ranged from 12 to 15 years old. Three grade levels were represented; sixth, seventh, and eighth grades. In the process of analyzing the data, string skill scores were compared to age and grade level to investigate a possible relationship. Table 8 shows no significant relationship between string skill scores and age or string skill scores and grade using Kendall's Tau correlation.
The relationships between string skills and age and string skills and grade were also tested with the Kruskal-Wallis (Hollander & Wolfe, 1973) statistical test. The Kruskal-Wallis test showed no significant relationship between string skills and age or string skills and grade level.

**Sub-purpose question 10**

How does the anticipated skill level compare to the actual skill level achieved?

There is no data to compare anticipated skill level with actual skill level achieved. The researcher had concluded from an earlier pilot study that mentally handicapped middle school students could attain some basic string skills comparable to the skills learned in a beginning elementary school string class.

The researcher anticipated a similar level of achievement for the students in this project. Based on daily observations and final performance tapes, it appeared to the researcher that all students were able to perform some string skills with varying degrees of proficiency. Some students appeared to achieve a string skill level comparable to normal elementary school students.

**QUESTION 3**

Which class setting was more appropriate for the mildly mentally handicapped, homogeneous (violin only), or heterogeneous (three or more different instruments)?
Table 9
Wilcoxon Two-Sample Test Comparing Homogeneous and Heterogeneous Classes on the Variables I.Q., S.Q., Attitude, and String Skills

<table>
<thead>
<tr>
<th>Variable</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique</td>
<td>-0.92</td>
<td>.36</td>
</tr>
<tr>
<td>Music</td>
<td>-0.10</td>
<td>.92</td>
</tr>
<tr>
<td>Ear Training</td>
<td>.03</td>
<td>.97</td>
</tr>
<tr>
<td>Total Score</td>
<td>.26</td>
<td>.80</td>
</tr>
<tr>
<td>Attitude</td>
<td>-.04</td>
<td>.96</td>
</tr>
<tr>
<td>I.Q.</td>
<td>-.86</td>
<td>.39</td>
</tr>
<tr>
<td>S.Q.</td>
<td>-.43</td>
<td>.67</td>
</tr>
</tbody>
</table>
The Wilcoxon Two-Sample Test was used to compare homogeneous and heterogeneous classes on the variables I.Q., S.Q. (social quotient), attitude, and string skills. The data presented in Table 9 indicates that there were no significant differences in I.Q., S.Q., or attitude for homogeneous and heterogeneous classes. Concerning the variables technique, music, ear training, and total string skill score, Table 9 indicates no significant difference between the two groups.

The data shows that mentally handicapped students can make similar progress in string skill achievement within a homogeneous or heterogeneous class setting.

Table 10 presents mean scores and standard deviations for both groups on technique, music, ear training, total skill score, attitude, I.Q. and S.Q.. The homogeneous classes had a slightly higher mean I.Q. score and S.Q. score. The homogeneous classes also had slightly higher mean scores on technique, music, and total string skill score.

After the string education experts had judged the students string skills and viewed video tapes of homogeneous and heterogeneous classes, they were asked on the Questionnaire for experts to offer an opinion about which class setting was most appropriate for student progress.
Table 10

Mean Scores and Standard Deviations for Homogeneous and Heterogeneous Classes on the Variables Technique, Music, Ear Training, Total Score, Attitude, I.Q., and S.O.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
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<tr>
<td>Technique</td>
<td></td>
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<td>Ear Training</td>
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</tr>
<tr>
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<td>23.30</td>
<td>3.29</td>
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<tr>
<td>Heterogeneous</td>
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<td>23.51</td>
<td>4.96</td>
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<tr>
<td>Total Score</td>
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<td>122.81</td>
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<tr>
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<tr>
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<tr>
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<tr>
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<th>Social Quotient</th>
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<tr>
<td>Heterogeneous</td>
<td>11</td>
<td>79.36</td>
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</table>
Two judges stated that the homogeneous setting was most appropriate although acceptable progress could be made in a heterogeneous class. One judge stated that the heterogeneous setting was the best for student progress and that the homogeneous class was not a suitable climate for student progress.
CHAPTER V
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to design and implement a string instrumental music curriculum for mildly mentally handicapped middle school students and to investigate the feasibility of string classes for this population.

A review of the literature revealed few research studies or curricula dealing with instrumental music for the mentally handicapped and few instrumental music programs for MMH students. The existing programs appeared to be mostly piano courses and band programs. There was a dearth of information regarding research and music programs in the area of string instrumental music for the mentally handicapped.

Three major questions were addressed in the study:

1. Was the curriculum content pedagogically accurate and appropriate for mildly mentally handicapped students?

2. Did student skill levels and attitudes toward string class indicate the feasibility of string classes for the mentally handicapped?
3. Which class setting was more appropriate for the mildly mentally handicapped, homogeneous (violin only), or heterogeneous (three or more different instruments)?

To seek answers to these questions, a procedure was developed to design a suitable string music curriculum for mildly mentally handicapped middle school students. The curriculum was evaluated by a panel of judges with expertise in string education, special education, and music for handicapped learners. The average judges' scores on the researcher-designed Curriculum Evaluation Form were compared to a criterion score to determine the appropriateness of the curriculum for MMH students. The curriculum was revised according to the recommendations of the experts, then re-evaluated.

The subjects for the study were twenty-four mildly mentally handicapped middle school students in the Columbus, Ohio, public schools. The students were divided into four classes of six, and each class was randomly assigned to a homogeneous or heterogeneous structure. The students received twelve weeks of string music instruction with two forty-five minute class lessons per week.

The feasibility of string classes was investigated by evaluating student string skills and attitudes towards string class. The string education judges viewed video tapes of individual student performances and evaluated
student string skills using the researcher-designed Performance Evaluation Form. The judges' scores on the Performance Evaluation Form were correlated by the use of Kendall's Tau statistical test to determine if the judges were using similar criteria to evaluate student string skills. The MMH students' string skills were compared to an acceptable score to determine student string skill level. Student string skills were also evaluated by daily observation. Judges' opinions of the feasibility of string classes for MMH students were recorded on the Questionnaire for Experts.

Student attitudes towards string class were investigated by researcher observation and student scores on the researcher-designed String Music Attitude Inventory for Special Students. Student attitude scores were compared to a criterion score to determine what portion of the students found string class enjoyable. Attitude scores were correlated with age, grade level, and string skill scores using Kendall's Tau correlation to determine a possible relationship.

The type of class setting most appropriate for MMH students was investigated by a comparison of the student skill scores in homogeneous and heterogeneous classes. The Wilcoxon Two-Sample Test was used to compare homogeneous and heterogeneous classes on the variables I.Q., Social Quotient, attitude, and string skills. Judges' opinions of
which class setting was most appropriate were recorded on the Questionnaire for Experts.

Sub-purpose questions one through seven investigating curriculum content were addressed in the process of developing and evaluating the curriculum. In chapter four, these questions were compared to portions of the curriculum and analyzed in terms of judges' scores and recommendations.

Sub-purpose questions eight and nine, investigating the relationship between I.Q. and string skills, and social skills and string skills were addressed by correlating the data to determine possible relationships.

Sub-purpose question 10 concerning a comparison of expected string skill level and actual string skill level achieved was analyzed by researcher observation. A criterion level of .05 was established for all statistical tests of significance.

Results of the Data Analysis

The following is a summary of the results obtained from the analysis of the data relating to the three major questions and the 10 sub-purpose questions considered in this study.

Sub-purpose questions one through seven will not be discussed separately in this section. Any pertinent information will be included under the results for question one.
Question 1

Is the curriculum pedagogically accurate and appropriate for mildly mentally handicapped students?

First Curriculum Evaluation and Judges' Recommendations

1. Twenty-three of the thirty items evaluated in the first curriculum evaluation were considered appropriate.

2. Items that received suggestions for improvement were course objectives, right hand skills, and left hand skills for the first level of instruction, and right hand skills, left hand skills, ear training, and note reading for the second level of instruction.

3. In level one, the judges suggested breaking down skills into smaller steps, omitting F and A scales for lower strings, omitting ear training, note reading, and sight reading, and avoiding premature use of the whole bow.

4. In level two, the judges suggested making skills less advanced with more prerequisites, and starting shifting motions earlier.

5. The judges suggested expanding the implementation section to include task analysis.
Second Curriculum Evaluation & Judges' Recommendations

1. Each of the twenty-one items evaluated received an average judges' score of acceptable (2) or better.

2. The judges suggested incorporating teaching films into the curriculum, expanding the note reading section, adapting the student evaluation form to meet the special needs of the MMH students, and modifying sample lesson plans to cover less material.

Questions 2

Did student skill levels and attitudes toward string class indicate the feasibility of string classes for the mentally handicapped?

1. Students improved string skills over the twelve weeks of instruction and appeared to enjoy string class.

2. The string education judges appeared to use similar criteria in evaluating student string skills.

3. Students achieved the highest scores on ear training, then technique, total score, and music respectively.

4. MMH student string skill scores are somewhat lower than what might be expected for normal children.

5. MMH students achieved a mean total score of 121 or
64% of the total possible score.

6. Student attitudes as measured by the String Music Attitude Inventory were considered positive for 78% of the students.

7. There was a marginal negative correlation between attitude and grade level.

8. Student attitudes toward string class and student string skill levels appear to indicate the feasibility of string classes for mildly mentally handicapped students.

9. All string education judges concluded from observation of video-taped string classes and individual student performances that string classes for MMH students are feasible.

Sub-purpose Question 8

Are there relationships between I.Q. and string skill level; I.Q. and muscular coordination; muscular coordination and string skill achievement?

There was no significant correlation between I.Q. and string skills.

Sub-purpose Question 9

Is there a relationship between social skills and string skills?

There was no significant correlation between social skills and string skills.
Sub-purpose Question 10

How does the anticipated skill level compare to the actual skill level achieved?

All students made some progress. Some students appeared to achieve string skills comparable to those of normal elementary school string students. The relationship between age and string skills and grade and string skills was also investigated. No significant relationship was found.

Question 3

Which class setting was more appropriate for the mildly mentally handicapped, homogeneous (violin only), or heterogeneous (three or more different instruments)?

1. There was no significant difference in skill scores for homogeneous and heterogeneous classes. It appears that MMH students can make similar progress in either class setting.

2. After viewing class video tapes for homogeneous and heterogeneous classes, two out of three judges preferred the homogeneous class setting for student progress.
Conclusions

The results of the study appear to suggest the following conclusions:

1. Mildly mentally handicapped middle school students are able to learn string instrument performance skills in a class setting. Therefore, string music instruction should be provided for MMH students according to their level of ability and interest.

2. The String Music Curriculum for Mildly Mentally Handicapped Middle School Students is pedagogically accurate and appropriate for MMH students. The curriculum was implemented successfully in the study, and all mentally handicapped students developed some string skills. Further investigation is needed to determine its effectiveness for the MMH middle school population.

3. Both homogeneous (violin only) and heterogeneous (three or more different instruments) class settings are suitable for MMH students. It appears that students can have positive experiences and make acceptable progress in either type of class structure.

The most important outcome of the study is that mildly mentally handicapped children have a new potential
opportunity to express themselves musically through string instrument performance. Until the present, music experiences for MMH children have been limited to general music, with an occasional opportunity for band or piano class participation. Now the MMH child has the potential opportunity for rich aesthetic sensory experiences, music learning and enjoyment, and the development of non-musical skills through string instrument performance.

The MMH students in this study acquired string instrument performance skills in a class setting without the benefit of private instruction or home practice. Some private instruction might be helpful to those children who are easily frustrated, although it is apparently not essential to success. Home practice is always desirable and should be encouraged whenever possible so that each child can develop his full potential as a string player.

The MMH students learned string skills in the same pedagogical sequence as normal children, although their lessons were modified to include a greater break-down of skills, smaller steps, a slower pace, more repetition, and more teaching devices than lessons for normal children. These modifications appeared to be successful in helping students to acquire string instrument playing skills.

The goal of the study was to provide successful experiences for students, therefore MMH middle school students were chosen for the special string classes instead
of MMH elementary school students. It was assumed that MMH middle school students were at a higher developmental level than MMH elementary school students, and that they would be capable of an achievement level comparable to that of normal elementary school string students. The results of the study indicate that MMH middle school students are developmentally able to develop basic string instrument performance skills in a class setting.

The second most important outcome of the study is that instrumental music teachers now have a string music curriculum that is pedagogically accurate and appropriate for mildly mentally handicapped students. The entire String Music Curriculum for MMH Middle School Students needs to be field tested in "special" string classes and modified as needed to meet the special needs of MMH students. After the field testing, an intermediate level of instruction should be incorporated into the curriculum. It is the opinion of this author that MMH middle school students are capable of intermediate level string skills, and should have the opportunity to continue to develop these skills according to their ability level.

Implementing "special" string classes will enable music educators to provide a greater variety of music experiences for the MMH child, and will further satisfy the provisions of P.L. 94-142 which insures the right of every handicapped child to a free and appropriate education in
In order to provide string classes for MMH children, instrumental music teachers must be willing to acquire the training needed to be effective "special" string teachers. Many colleges and universities offer courses in special education and music for handicapped learners. These courses provide the information needed to understand mentally handicapped children, and to provide appropriate music experiences for them. The advanced courses usually include field experience which is an important preparation for teaching MMH children.

School board members and administrators must be willing to spend the time and money needed to provide teacher training, appropriate scheduling, appropriate student-teacher ratios, equipment, instruments, and materials for the "special" string program. Also, time must be provided in the "special" string teacher's schedule to consult with special education experts and the school psychologist in the planning of goals for MMH students.

McLaughlin (1963) expresses the belief that the mentally handicapped child's principal purpose in life is to glorify God. She advocates school music as a means that might be employed by the music teacher to help the child achieve this goal. This author also believes that each human being's principal purpose in life is to glorify God. The "special" string music curriculum is offered here as a
potential means for the mentally handicapped child to have enriching musical experiences through string instrument performance, and in so doing, to glorify God.

The Curriculum

One judge had reservations about the feasibility of ear training for MMH students. Ear training was included in the revised curriculum because all students demonstrated some ability and achievement in this area and because ear training is a necessary skill for string instrument performance.

Note reading was included in the revised curriculum despite the reservations expressed by two judges because students showed an interest in learning to read musical notation, and because other educators have successfully taught mentally handicapped students to read rhythms and music from standard notation (Buker, 1966; Williams, 1978). Perhaps the note reading section could be expanded to include smaller steps and more teaching devices that would be beneficial to MMH students.

The German bow hold for bass was not included in the curriculum because of the possible difficulty of this position for MMH students. The use of the whole bow was included in the beginning level of instruction, despite one concern against it, so that students would not develop the bad habit of using only a small portion of the bow.
The Lesson plans listed in the curriculum perhaps included more material and moved faster from skill to skill than would be appropriate for some MMH students. The lesson plans were presented as they appear for several reasons: 1. These lesson plans were used in the study, 2. Most students seemed to be able to concentrate for the duration of the lesson, 3. The researcher was concerned about holding the interest of the students who were adolescents, and 4. There was an interest in developing and testing a variety of skills in a short amount of time. The lesson plans presented in the curriculum should be considered as an example of lesson plan development with the understanding that lesson plans must be adjusted to the specific needs and handicaps of every student in each unique situation.

Methods of student reinforcement were included in the revised curriculum because they seemed to produce positive results within the twelve weeks of instruction. MMH students, especially the younger ones, appeared to need some tangible reinforcements for their efforts in string class.

The beginning instruction booklet described in the revised curriculum seemed to appeal to the students. Many students kept their instruction booklet after the project was completed.
Student Skill Level

MMH student string skill scores on the Performance Evaluation Form were slightly below what might be expected for normal students. However, the students did have a total score of 64% which indicates a certain level of string skill achievement. This data coincides with information from other studies in which the music skills of normal and mentally handicapped children have been compared. The mentally handicapped children have achieved music skill levels slightly to significantly lower than normal children (Kaplan, 1977; Nocera, 1981).

Some MMH middle school students were able to develop string skills similar to those of normal elementary school string students. Williams (1978) reported similar findings when comparing the playing skills of handicapped adolescent band students and those of normal elementary school band students. Parents and teachers noted that the skill levels appeared to be similar for both groups.

MMH string students achieved the lowest skill scores in music performance. The music portion of the final student evaluation consisted of individual student performances of the melodies learned during the twelve weeks of instruction. During the test, students read fingerings from a musical notation booklet placed on a music stand. Students frequently had difficulty keeping a steady tempo and accurate rhythm, and occasionally added
extra notes to the melody.

The music performance scores are probably the lowest skill scores because the skills involved were the most difficult to achieve. These skills required more concentration and a longer attention span than the technique and ear training skills tested on the final evaluation. Also, it appeared that students had less confidence performing pieces individually than in the group. It is likely that the music performance skills would have improved if the lessons had continued.

Is there a relationship between I.Q. and String Skills?

One might expect a significant positive correlation between I.Q. scores and string skill scores. The fact that there was no significant correlation could be related to the fact that note reading (Buker, 1966) was not required in the development of string skills or that mental age is a more important factor in determining string skill level than I.Q. Rosene (1976) concluded the following when comparing EMH student wind instrument skills to I.Q. and mental age:

On the basis of the data, it may be hypothesized that the mental age represents a better predictor of success in instrumental music for EMH children than the intelligence quotient (p.327).
Recommendations

Recommendations for Curriculum Revision

In the process of implementing and completing the study, it became apparent that certain areas of the curriculum could be revised to better accommodate the needs of special string teachers and MMH students.

1. It would be beneficial to MMH students for the note reading section of the curriculum to be expanded to include smaller steps and more teaching devices that are appropriate to their needs.

2. A discussion of task analysis as it relates to specific string skills could be a positive addition to the implementation section of the curriculum.

3. MMH students who show signs of frustration in string class might benefit from some private instruction, time permitting.

4. It was noted that students in the upper grades had a slightly negative attitude. Perhaps the beginning level of instruction should be offered mainly to sixth graders, so that when these students reach seventh and eighth grade, they will have acquired more skills. The higher skill level would hopefully enhance enjoyment, aesthetic experiences, and positive attitudes toward string
class.

5. The data revealed that both class settings were appropriate for MMH students. The heterogeneous class setting has certain advantages that music teachers may want to consider: a. Students in a heterogeneous class can learn about and experience all the orchestral stringed instruments, b. The heterogeneous class lends itself to the development of string ensembles and orchestras, c. The different instruments, when played together with a certain degree of proficiency, create a rich full sound that perhaps provides a better aesthetic experience for the students, and d. Students have more choices when selecting an instrument.

7. Daily skill testing and evaluation could be refined in order to more precisely measure student progress and retention.

**Recommendations for Research**

There are many aspects of string instrumental music for mildly mentally handicapped students that need to be researched. This project explored the feasibility of string instrumental music class instruction for MMH middle school students and attempted to provide teaching methods and materials for MMH student string classes. The
following questions should be investigated if music educators are to provide quality string music programs for MMH students.

1. What is the precise learning process for MMH students on each individual string skill? Is it different than the learning process for normal children?

2. What methods of teaching note reading are appropriate for elementary and middle school MMH string students?

3. What string skills can be achieved by MMH middle school students with long-term string instrument instruction using the String Music Curriculum for MMH Middle School Students? What revisions would need to be made in the curriculum?

4. Are existing string teaching films such as the Paul Rolland films appropriate tools for a stringed instrument program for mentally handicapped students?

5. Is there a relationship between mental age and string skill achievement?

6. What skills and objectives would be appropriate for a second level of instruction for the String Music Curriculum for MMH Middle School Students?

7. What are the effects of stringed instrument class instruction on the playing skills of MMH
elementary school string students?

8. Which type of instruction is appropriate for MMH elementary school students; class instruction or private instruction?

9. How do the playing skills of normal elementary school string students compare to the playing skills of MMH elementary school string students?

10. Is it possible for elementary school MMH string students to acquire string skills in a mainstreamed class?

11. Which age level is most appropriate for a beginning string program for MMH students, elementary or middle school?
QUESTIONNAIRE FOR EXPERTS

A. After viewing both tapes of student performances, it is my professional opinion that string classes for MMH middle school students are feasible, not feasible (circle one).

B. After evaluating videotaped student performances, it is my opinion that heterogeneous, homogeneous (circle one) classes offer the best climate for student progress.

C. I agree that acceptable progress could be made in a homogeneous class. (circle one) yes, no

D. I agree that acceptable progress could be made in a heterogeneous class. (circle one) yes, no

E. This form is a good measure of student performance as seen on the videotapes. (circle one) yes, no

Comments:
APPENDIX B
A STRING MUSIC CURRICULUM
FOR MILDLY MENTALLY HANDICAPPED
MIDDLE SCHOOL STUDENTS
FIRST EDITION
A STRING MUSIC CURRICULUM FOR
MILDLY MENTALLY HANDICAPPED
MIDDLE SCHOOL STUDENTS

Diana Van Camp
Ohio State University
1985
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Music experiences are recognized as vital to the total education and development of every child. Participation in music performance provides aesthetic experiences and develops the skills necessary for cognitive, affective, and psychomotor functioning. Providing a variety of musical offerings is considered an important function of the public school in order to meet the aesthetic needs of the total school population. A quality public school music curriculum is one that offers general music, a variety of vocal music, and a variety of instrumental music including band and orchestra.

When considering the total development of each child in the public school population, the mildly mentally handicapped child must also be included. Public Law 94–142 of 1975 insures the right of each handicapped child to a free and appropriate education in the least restrictive environment. Therefore, if music is part of the school curriculum, it must be offered to all children, including the mentally handicapped (MH).

The American Association of Mental Deficiency defines mental retardation as sub-average general intellectual functioning (i.e. two or more standard deviations below the mean) existing concurrently with deficits in adaptive behavior that is manifested during the developmental period.
(birth through age 18). Mildly mentally handicapped children are able to read, write, and use basic mathematics. As adults they have the potential of functioning independently on personal and social levels, and of being self-supporting. Music experiences can greatly enhance the development of these exceptional children and help establish a sense of self-worth (Nocera, 1979).

Music often provides success for mentally handicapped students who are less successful in other areas. Group music lessons and social activities help develop important social relationships. Music communicates with every MMH child, unlike activities that depend totally on verbal comprehension. Music provides an alternative means through which children who do not verbalize well, such as the mentally handicapped, can express their feelings and ideas. Because of music's flexibility, music activities can include MH children of differing abilities.

Instrumental music experiences are especially valuable to the development of the mentally handicapped child in the areas of manual dexterity, control of movements in time and space, and mental concentration. These skills are very important to the mentally handicapped child for future independent functioning and career opportunities (Alvin, 1976).
If educators believe that the function of education is the total development of every child, they must include the mentally handicapped child. If band and orchestra are offered to other children in our schools, the mentally handicapped child must have an equal opportunity to participate in instrumental music. This curriculum is offered as a guide for implementing a string program for MMH middle school students with the hope that instrumental music teachers will be encouraged to provide a string program for these students.
Definitions

1. **Concrete learning experiences.** Learning in which the student experiences the concepts and skills being taught through participation in specific activities.

2. **Chronological age.** An individual's total number of years and months since birth. (C.A.)

3. **I.E.P.** The I.E.P. is the Individual Education Program written for each special student. It includes clinical test scores, long range goals and teaching strategies, student strengths and weaknesses, and recommended student activities.

4. **Individualized Instruction.** Instruction in which the lesson objectives, activities, and teaching strategies are modified to meet the needs of individual students.

5. **Learning Skills.** Basic skills needed for all learning, i.e., auditory, visual, motor, language, and social skills.

6. **Learning Styles.** The mode through which a child learns best; i.e., through listening (auditory), through seeing a visual representation of a concept (visual), through experiencing what is to be learned (kinesthetic, tactile), or through a combination of these modalities.

7. **Mental Age.** A measure of determined mental ability based on the child's success in passing a series of tests ordered in difficulty at various age levels. (M.A.)

8. **Reinforcement of Student Behavior.** Appropriate reinforcement occurs when the teacher responds positively to appropriate student behavior and ignores or responds negatively to inappropriate student behavior. Reinforcement error occurs when the teacher responds negatively to appropriate student behavior or vice versa.
Goals of a String Program for MMH Students

Each student will:

1. Participate in enjoyable and successful experiences involving string music.

2. Develop the ability to express himself creatively through string music performance.

3. Have an opportunity to develop his individual abilities in the areas of affective, psychomotor, and cognitive skills by playing and listening to string music.

4. Have an opportunity to develop his potential as a musician and as a string player.

5. Develop a positive self-image through string skill achievement.

6. Experience the aesthetic and expressive qualities of music through string music making.

7. Develop the ability to create and interpret music through string music experiences.

8. Develop self-discipline through string instrument practice.

9. Have an opportunity to discover, perform, and appreciate string and orchestra music.

10. Develop music understandings and skills that are appropriate to his functioning level.
FIRST YEAR OF INSTRUCTION: BEGINNING STRING CLASS

Program Structure:

1. Student Participation. Beginning string class is available to all MMH middle school students who have been recommended by their special education teacher on the basis of academic work and social behavior that is acceptable to the special education teacher.

2. Class Size. A maximum of six to eight students to ensure individualized instruction.

3. Class Structure. Either a homogeneous or heterogeneous class structure will be recommended in the final version of the curriculum, depending on the results of the twelve weeks of instruction.

4. Frequency of Instruction. String classes will meet twice a week for a total of ninety minutes of instruction.

Course Objectives: Each student will

1. Demonstrate proper instrument care and maintenance.

2. Demonstrate basic right-hand skills (i.e., bow hold, detache stroke, direction changes, slurs, string crossings, martele stroke).

3. Demonstrate basic left-hand skills (i.e., appropriate body posture, instrument playing position, hand frame, chromatic alterations).
4. Demonstrate basic ear training skills (i.e., ability to manipulate a pitch, match a pitch, play short and simple melodies in first position by rote, play simple first position major and minor scales).

5. Demonstrate note reading ability for first position according to his functioning level (i.e., first position pitches in the keys of G, D, A, C, F, a and d).

6. Demonstrate basic musicianship by observing dynamic markings, phrasing, and articulation.

7. Perform simple rhythms according to his functioning level, i.e., these note values and rests in various combinations: \( \text{\textbullet \textbullet \textbullet \textbullet \textbullet \textbullet \textbullet \textbullet} \) >

8. Demonstrate musical independence and ensemble skills by performing an independent part in an ensemble and by watching the conductor.

9. Demonstrate self-discipline and group discipline during string class.

10. Learn and perform a variety of folk songs by rote and from notation.

11. Sight-read simple songs with fingerings marked underneath notation.
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<th>Right Hand Skills</th>
<th>Teaching Devices</th>
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<td><strong>1. Bow Hold</strong></td>
<td>1. Touch tip of thumb to first joint of middle finger to form a &quot;telescope.&quot; Look through the telescope.</td>
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<td></td>
<td>2. Place a pencil in the telescope, drape fingers over pencil in proper bow hold position. Tap each finger against the pencil.</td>
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<td>3. Cello/Bass: Hold bow at balance point first for relaxed hand.</td>
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<tr>
<td><strong>2. Detache Stroke</strong></td>
<td>1. Violin/Viola: Start in the middle of the bow. Think of opening and closing the &quot;elbow gate.&quot;</td>
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<td></td>
<td>2. Shoulder bowing: bow on the left shoulder to watch for proper bow angle and opening and closing of the elbow gate.</td>
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<td>3. Cello/Bass: Start in lower half of bow</td>
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<td><strong>3. Direction Changes</strong></td>
<td>1. Push and pull: hold bow in left hand, place right hand in proper bow hold at the balance point. Push and pull fingers of right hand. Repeat process at the frog.</td>
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<td>2. Extend and flex fingers while maintaining good bow hold and holding</td>
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</table>
4. Slurs

1. Slur open string to first finger on every string using middle portion of bow. Repeat using upper half, lower half, and whole bows.

2. Slur major tetrachords using middle of bow, upper half, lower half, and whole bows.

5. String Crossings

1. Start with low string to high string using separate bows.

2. Stop at different arm levels to see how the elbow moves.

6. Martele Stroke

1. Think of a ping or ka sound for the beginning attack.

2. Start with ten pounds of weight and release it gradually throughout the stroke. End with 0 lbs.

Left Hand Skills

1. Body Posture

Teaching Devices

1. Grow an inch: pull body up tall, lengthen body

2. Lean to the right and to the left for the feeling of motion and transfer of weight.

3. Cello: three point balance between hips and feet

4. Bass: Start sitting
2. Instrument Playing Position

1. Numbers game

2. Violin/Viola: line up left foot, nose and scroll

3. Cello: bear hug to secure instrument position

3. First Position Hand Frame

1. Rolland's Shuttle Game—slide up and down the fingerboard, pluck third and fourth fingers

2. Tap all four fingers simultaneously all over the fingerboard while maintaining left hand shape

3. Cello: hand stretched out, bring arm back and forth to left hand position

4. Bass: balance hand around second and third fingers; stretch four and one where needed.

5. Major and minor tetrachords on each string


4. Chromatic Alterations

1. Violin/Viola: slide fingers independently—low one to high one, low two to high two.

2. Cello: play
Ear Training Skills

1. Ability to manipulate a pitch

2. Ability to match a pitch

3. Ability to play short simple melodies in first position by ear

4. Ability to play major and minor scales by ear

Teaching Devices

1. Slide from c natural to c sharp; f natural to f sharp (violin/viola).

2. Adjust intonation: make note slightly higher or lower.


1. Match single pitches played by teacher.

2. Match short one string melodic fragments played by the teacher.

1. Use imitation, play very short fragments.

2. Use much repetition

1. Have students play major and minor tetrachords.

2. Have students play two string melodic fragments leading to scales
Note Reading

1. First year note reading to begin after several lessons of rote instruction during which musical symbols and terms such as clef signs, note values, the staff, dynamic markings, and tempo markings are taught.

2. After rote instruction period, proceed to transition stages using line notation and standard notation with fingerings for previously learned songs.
   a. Line notation: Twinkle Twinkle Little Star (violin part)
      
      A string
      
      D string

   b. Standard notation with fingerings: fingerings should be color-coded to match colored finger placement tapes on fingerboard.

   "Hot Cross Buns"

4. Then have students play open strings and successive pitches on one string from standard notation, first with marked fingerings, then without.

5. First year note reading to include:
   a. All pitches in first position in the following keys: G, D, A, C, F, a, and d.
   b. These note values and rests in various combinations:

   c. Sight reading of simple songs with fingerings underneath notation.
STRING EVALUATION  
(To Be Sent to Parents)

Progress of: ____________________________ Room ____________
Evaluated by: ____________________________ Date ____________

<table>
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<tr>
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<th>Needs to be achieved</th>
<th>Just needs improvement</th>
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<tr>
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<td>Demonstrates independence in music learning</td>
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<td>Follows directions</td>
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<tr>
<td>Responds positively to instruction</td>
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<tr>
<td>Puts forth best efforts at all times</td>
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<td>Has a good attitude and spirit of cooperation</td>
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<td>Seeks help when needed</td>
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<td>Is responsible about home preparation, practice reports, written assignments, and special projects</td>
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</table>

COMMENTS:


Musical Events for the Year

1. Fall concert of four or five folk songs to be performed for the special education class.

2. Christmas party/concert for parents of special education string players (repeat folk songs, add Jingle Bells).

3. February concert: perform for a special education class at another school.

4. Spring concert: perform several selections as a class for the music department's spring concert.

5. String Ensemble Option: During the second semester of instruction, the beginning string class will join with the second year (intermediate) string class to form a string ensemble. The ensemble will rehearse after school and perform on one concert.

6. Attend a minimum of one professional string music concert.

Social Events for the Year

1. Christmas party for special education string players and their parents.

2. Lunch out after the February concert.

3. Spring picnic for special education string players.
SECOND YEAR OF INSTRUCTION: INTERMEDIATE STRING CLASS

Program Structure:
1. Student Participation. Intermediate string class is available to all MMH middle school students who have completed beginning string class.
2. Class size. A maximum of six to eight students to ensure individualized instruction.
3. Class Structure. Either a homogeneous or heterogeneous class structure will be recommended in the final version of the curriculum, depending on the results of the twelve weeks of instruction.
4. Frequency of Instruction. String classes will meet twice a week for a total of ninety minutes of instruction.

Course Objectives: Each student will
1. Demonstrate the ability to tune his own instrument according to his functioning level.
2. Demonstrate intermediate right hand skills (i.e., refined detache bowing, direction changes, string crossings, slurs, martele, staccato, and spiccato bowings).
3. Demonstrate intermediate left hand skills (i.e., refined left hand frame, chromatic alterations, major and minor scales, simple double stops,
shifting to higher positions, and scales in higher positions).

4. Demonstrate intermediate ear training (i.e., refined ability to manipulate and match pitches, play short melodies by rote, play major and minor tetrachords by rote, play short melodic fragments by rote, play longer melodic fragments on two strings, longer simple melodies, more major and minor scales and simple double stops by rote).

5. Demonstrate intermediate level musicianship by observing dynamic markings, phrasing, articulation, and tempo markings.

6. Demonstrate musical independence and ensemble skills by performing an independent part in an ensemble, and by watching the conductor.

7. Demonstrate self discipline and group discipline during ensemble playing.

8. Perform intermediate rhythms according to his functioning level (i.e., these rests and note values in various combinations: \[ \text{\textbullet \ D \ D \ D \ D \ D} \]

9. Demonstrate note reading skills according to his functioning level (i.e., first position pitches in the keys of C a, F d, G e, D b, A, Bb g, Eb and higher position pitches in the keys of C, G, D).
10. Demonstrate sightreading of simple songs in the keys of G, D, A, and C with note values such as o \ \ \ \ \n
11. Learn and perform a variety of folk songs and ensemble pieces by rote and from notation.

<table>
<thead>
<tr>
<th>Right Hand Skills</th>
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<tr>
<td><strong>1. Refined:</strong></td>
<td></td>
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<tr>
<td>a. detache stroke</td>
<td>a. Elbow leads the motion and must be weighty.</td>
</tr>
<tr>
<td>b. direction changes</td>
<td>b. Hold bow in left hand, place right hand on bow at balance point, extend and flex fingers of right hand.</td>
</tr>
<tr>
<td>c. slurs</td>
<td>c. Slur notes across strings 2, 4.</td>
</tr>
<tr>
<td>d. string crossings</td>
<td>d. Faster motion: use less arm motion, more wrist and fingers.</td>
</tr>
<tr>
<td><strong>2. Refined Martele</strong></td>
<td></td>
</tr>
<tr>
<td>1. Place bow on string, press and release weight without drawing bow.</td>
<td></td>
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<tr>
<td>2. Play major and minor tetrachords with martele bowing.</td>
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<tr>
<td><strong>3. Staccato Bowing</strong></td>
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<tr>
<td>1. Think of a ping or ka sound for beginning attack.</td>
<td></td>
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<tr>
<td>2. Start with &quot;ten&quot; pounds of weight and keep it</td>
<td></td>
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</table>
4. Spiccato

1. Holding bow at balance point, bow short on the string strokes allowing fingers to flex.

2. Think of the bow as a paint brush, brush the string in large arcs.

Left Hand Skills

1. Refined
   a. Hand frame
   b. Chromatic alternations

2. Shifting from first to higher positions

3. Learning higher positions:
   - Violin/viola - third position
   - Cello - fourth position
   - Bass - second position

Teaching Devices

1. More major and minor scales in first position
   a. Cello: start with backward extensions first.

2. Ski slopes: slide all the way to the end of the fingerboard while maintaining hand shape.

2. Sirens up and down the fingerboard on the third finger.

3. Rote shifting exercises: 1-1, 1-1, 2-2, 2-2, 3-3, 3-3, 4-4, 4-4.

2. Short sections of music in higher position

3. Scales in higher positions
### Ear Training

1. **Refined**
   - a. Manipulate a pitch
   - b. Match a pitch
   - c. Short melodies by ear
   - d. Major and minor tetrachords
   - e. Short melodic fragments with successive pitches and leaps

2. **Longer melodic fragments with skips on one and two strings**

3. **Longer simple melodies in first position by ear**

4. **First position major and minor scales in the following keys**: C a, F d, G e, D b, A, Bb g.

5. **Simple double stops**

### Teaching Devices

1. **Much repetition**
   - a. Check octaves with open strings.
   - b. Play two-string melodic fragments.
   - c. Phrase by phrase
   - d. Use new keys.
   - e. Use new keys.

2. **Listen to individuals.**

3. **Start with small fragments.**
   - 1. Much repetition
   - 2. Start with small fragments.
   - 1. Start with two open strings.
   - 2. Major and minor tetrachords with an open string
Note Reading

1. Review
   a. Musical symbols, terms, and rhythms
   b. Play from notation: familiar songs with color-coded fingerings.
   c. Play from notation: successive notes on each string with and without fingerings marked.
   d. Play from notation: short pieces without fingerings.

2. Learning to read from notation—perform scales in these keys: C, A, F, D, G, E, Bb.

3. Learning to read from notation—perform pieces in these keys: C, G, C#, A, F, Bb, a, d.

4. Second year note reading to include:
   a. These note values and rests in various combinations:
      \[
      \begin{align*}
      &\text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \\
      &\text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet}
      \end{align*}
      \]
   b. All pitches in first position in the following keys: C, A, F, D, G, E, Bb, a, d.
   c. All pitches in the third position in the following keys: C, G, D
   d. Sightreading of simple songs in G, D, A, C with note values such as:
      \[
      \begin{align*}
      &\text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet} \quad \text{\textbullet}
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COMMENTS:
Musical Events for the Year

1. Fall concert with beginning string class for the special education class.

2. Fall concert: perform a few selections on the music department's fall concert.

3. February concert: join beginning class to perform for a special education class at another school.

4. Spring concert: perform several selections on the music department's spring concert.

5. String Ensemble Option: During the second semester of instruction, the intermediate string class will join with the beginning string class to form a string ensemble. The ensemble will rehearse after school and perform on one concert.

6. Attend one in-school professional string ensemble concert.

Social Events for the Year

1. Fall picnic to renew friendships

2. Christmas party for special education string players and their parents

3. Lunch out after the February concert.

4. Spring picnic for special education string players.
IMPLEMENTATION

To effectively implement a string program for mildly mentally handicapped students, instrumental music teachers must be knowledgeable concerning the characteristics of MMH students, be able to structure learning tasks for them, have appropriate lesson planning and delivery skills, be able to select suitable music materials, be able to structure appropriate string music lessons, and be able to evaluate student and teacher performance.

Characteristics of MMH students. Mildly Mentally Handicapped children:

1. Develop concepts in the same order and stages as normal children, only at a later age.
2. Have a slower rate of learning.
3. Have a short attention span.
4. Have a short memory.
5. Have difficulty in verbalizing some concepts.
6. Are slower to master language skills.
7. Have difficulty generalizing.
8. Have only limited ability to abstract.
9. Have social problems when expected to function beyond their abstracting ability.

Learning Tasks for the MMH student should:

1. Be more brief and sequentially presented.
2. Proceed in smaller steps.
4. Include more repetition than lessons for other children.
5. Contain more concrete learning experiences.
6. Be more activity-oriented and contain a wider variety of activities.
7. Cover less material than lessons for other children.
8. Include more rote learning.

In order to provide appropriate string music lessons for MMH students, the music teacher should have specific competencies and knowledge.

The teacher should:

1. Acquire information about each student that will aid the development of goals and lesson planning: I.Q., gross motor skills, language skills, fine motor skills, auditory skills, visual abilities, mental age, social skills, abstracting ability, and the level of academic abilities in the areas of reading and computation. This information can usually be found in the student's Individual Education Program. (I.E.P.)

2. Know each child's strengths and weaknesses.

3. Work closely with the special education teacher and other staff members involved with special learners.

4. Set short-term, intermediate, and long-range goals for each child.

5. Devise sequential instructional objectives.

6. Devise teaching strategies that will create an optimum learning environment.

7. Design lessons so that the special learner is able to improve deficient learning skills (i.e., auditory, visual, motor, language, or social) while achieving musical goals.
8. Use student strengths as supportive skills to insure success in those activities planned to improve deficient learning skills.

9. Be aware of individual learning styles such as auditory, visual, and kinesthetic.

10. Individualize instruction.

11. Plan activities to help students generalize new learning.

12. Speak in simple sentences.

13. Praise students as often as possible.

14. Be willing to accept and reinforce small steps in the learning process.

15. Evaluate student skill level at the end of every lesson to determine the success of lesson objectives.

16. Modify teaching strategies or change them as student progress indicates.

17. Evaluate his/her teaching frequently.

Lesson planning should include:

1. Music activities that promote creativity, flexibility, independence, and making choices.

2. Musical goals that challenge the student just enough to promote growth.

3. A combination of musical and non-musical goals (i.e., goals for improving deficient learning skills).

4. Composing, performing, and listening.

Music Materials:

1. Should be appropriate for the chronological age of the student.

2. Should have a skill level compatible with the mental age of the student.
3. Must illustrate more clearly the concepts being taught.

4. Must be of the highest musical quality in order to accommodate manipulation and repetition.
SAMPLE LESSON PLAN

Class _Beginning Strings_ Lesson Number 1 Date _____

Objectives: The student will:

1. Practice auditory, visual, language, motor and social skills.
2. Demonstrate proper instrument care.
3. Demonstrate proper bow hold.
4. Demonstrate proper body posture and instrumental hold.
5. Name and pluck open strings in tempo.
6. Match open string pitches played in simple rhythms.
7. Sing Hot Cross Buns with words.
8. Sing Hot Cross Buns with instrument fingerings.
9. Sing Hot Cross Buns with fingerings while moving fingers of left hand.

Procedures:

1. Getting acquainted: Teacher and students will exchange information about their musical experiences and life experiences.

2. Teacher will demonstrate proper care of instruments, and name parts of instruments.
   a. Students will take instruments out of the cases and name parts.

3. Right Hand Skills Teaching Devices
   a. Bow Hold
      1. Teacher will model telescope.
5. Teacher will check each student for proper pencil hold.

   1. Form a telescope with thumb and first joint of middle finger. Look through telescope.
   2. Place pencil in the telescope, drape fingers over pencil
3. Teacher will repeat procedure with bow.

4. **Left Hand Skills**
   
a. **Body Posture**
   
   1. Teacher will model correct posture for each instrument.

   b. **Instrument Playing Position**
   
   1. Teacher will model proper instrument hold for each instrument.

   2. Teacher will model naming and plucking open strings.

   3. Students will imitate above.

5. **Ear Training Skills**

   a. Teacher will pluck open string.

   b. Teacher will sing *Hot Cross Buns* with words.

   1. Students will learn *Hot Cross Buns* with words.

**Teaching Devices**

1. **Grow an inch:**
   
   - Lengthen body.

2. **Lean to the right and left for motion and transfer of weight.**

3. **Violin/viola:** line up left foot, nose and scroll.

4. **Cello:** Give cello a bear hug for instrument position.

5. **Numbers game**

6. **Pluck open strings four times in tempo.**

7. **Play all four strings on each instrument using various simple rhythms.**

8. **Sing phrase-by-phrase.**
6. **Learning the First Song**

   a. Teacher will sing *Hot Cross Buns* with violin/viola fingerings.

   1. Students will sing *Hot Cross Buns* using the fingerings for their instrument.

<table>
<thead>
<tr>
<th>Teaching Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Much repetition</td>
</tr>
<tr>
<td>2. Phrase-by-phrase</td>
</tr>
<tr>
<td>3. Write fingerings on board.</td>
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</table>
The teacher should evaluate student skill level at the end of every lesson to determine each student's progress toward lesson objectives. Objectives and teaching strategies should then be modified or changed as student progress indicates.

**STUDENT EVALUATION FORM**

<table>
<thead>
<tr>
<th>Class ______________________</th>
<th>Date __________________</th>
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</thead>
<tbody>
<tr>
<td>Student ____________________</td>
<td>Teacher ________________</td>
</tr>
</tbody>
</table>

1. **Right Hand Skills**  
   a. ______________________  
   b. ______________________  

2. **Left Hand Skills**  
   a. ______________________  
   b. ______________________  

3. **Ear Training Skills**  
   a. ______________________  
   b. ______________________  

4. **Note Reading Skills**  
   a. ______________________  
   b. ______________________  

5. **Music Performance Skills**  
   a. **Pieces learned**  
   b. **Tone**  
   c. **Intonation**  
   d. **Musical sensitivity**  

6. **Non-musical Goals (learning skills)**  
   a. ______________________  
   b. ______________________  
   c. ______________________  

7. **Social Behavior**  
   a. **Follows directions**  
   b. **Puts forth best effort**  
   c. **Seeks help when needed**  
   d. **Demonstrates proper instrument care**  
   e. **Exhibits self-discipline**  
   f. **Demonstrates positive rapport with peers**  

   a. ______________________  
   b. ______________________  
   c. ______________________  
   d. ______________________  
   e. ______________________  
   f. ______________________
g. Demonstrates positive rapport with teacher
h. Appears to have positive self-image in string class

Evaluation Results: New or modified objectives/teaching strategies.
To insure quality teaching and learning, the special education music teacher must frequently evaluate his/her teaching. This sample evaluation form may be used for self-evaluation of tape recorded or videotaped lessons, or for observation by peers.

**TEACHER EVALUATION FORM**

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<th>Lesson Structure</th>
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<th>Unacceptable</th>
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<tbody>
<tr>
<td>1. Sequential and in small steps</td>
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<td>__________</td>
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<tr>
<td>2. Student strengths used as supportive skills to improve deficient skills</td>
<td>__________</td>
<td>__________</td>
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<tr>
<td>3. Concrete learning experiences</td>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>4. Activity-oriented</td>
<td>__________</td>
<td>__________</td>
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<td>5. Rote activities</td>
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</table>

**Musical Knowledge and Skills**

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<td>2. Left Hand Skills</td>
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<td>3. Ear Training Skills</td>
<td>__________</td>
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<td>4. Rote Teaching Skills</td>
<td>__________</td>
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<td>5. Repertoire selection</td>
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<td>6. Approach to note reading</td>
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<td>7. Piano playing and singing skills</td>
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**Delivery**

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<td>2. Eye contact</td>
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<td>3. Energy level</td>
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<td>7. Enunciation</td>
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<tr>
<td>8. Voice modulation</td>
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<td>9. Simple sentences</td>
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<td>10. Transitions between activities</td>
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<tr>
<td>11. Facial expression</td>
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<tr>
<td>12. Body language</td>
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Classroom Management

1. Reinforcement of student behavior

Evaluation Results:

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<th>Appropriate</th>
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REFERENCES AND RECOMMENDED READING


IL: Scott, Forseman, and Company.

APPENDIX C
STRING MUSIC CURRICULUM
EVALUATION FORM
STRING MUSIC CURRICULUM EVALUATION FORM

Determining Content Validity

Name ____________________________

Directions:

Please circle your decisions for each section:
(circle number)

0. unacceptable
1. needs revision
2. acceptable
3. excellent

I. Philosophy

0 1 2 3

comments:

II. Definitions

0 1 2 3

comments:
III. Goals of a String Program for Mildly Mentally Handicapped Middle School Students

Comments:

IV. First Year of Instruction

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<td>Note Reading</td>
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<td>Student Evaluation Form</td>
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<td>Social Events for the Year</td>
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Comments:
V. Second Year of Instruction

Program Structure ............ 0 1 2 3
Course Objectives ............ 0 1 2 3
Right Hand Skills .......... 0 1 2 3
Left Hand Skills ............ 0 1 2 3
Ear Training Skills ......... 0 1 2 3
Note Reading ................. 0 1 2 3
Student Evaluation .......... 0 1 2 3
Musical Events for the Year .. 0 1 2 3
Social Events for the Year .. 0 1 2 3

Comments:

VI. Implementation

Introduction
Characteristic of MMH Students . 0 1 2 3
Learning Tasks for the MMH .... 0 1 2 3
Teacher Competencies ........ 0 1 2 3
Lesson Planning .............. 0 1 2 3
Music Materials .............. 0 1 2 3
Sample Lesson Plans .......... 0 1 2 3
Student Evaluation ........... 0 1 2 3
Teacher Evaluation ........... 0 1 2 3

Comments:
APPENDIX D
STRING MUSIC ATTITUDE INVENTORY FOR SPECIAL STUDENTS
Name ____________________ School ____________________

STRING MUSIC ATTITUDE INVENTORY  
FOR SPECIAL STUDENTS  

Examples:  

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</table>

Circle One Answer  

1. I enjoy what we do in string class.  
   Agree Not Sure Disagree  
2. String class is very interesting to me.  
   Agree Not Sure Disagree  
3. I feel good when I'm in string class.  
   Agree Not Sure Disagree  
4. I like playing a stringed instrument.  
   Agree Not Sure Disagree  
5. I feel good about myself when I play a stringed instrument.  
   Agree Not Sure Disagree  
6. Playing a stringed instrument is very interesting to me.  
   Agree Not Sure Disagree  
7. I would like to continue playing my stringed instrument.  
   Agree Not Sure Disagree  
8. I would like to take more string classes.  
   Agree Not Sure Disagree  
9. I think other special students would like playing stringed instruments.  
   Agree Not Sure Disagree
10. I think other special students would enjoy string class. 
   Agree  Not Sure  Disagree

11. I think all special students should have a chance to take string class. 
   Agree  Not Sure  Disagree

12. I think all special students should have a chance to play stringed instruments. 
   Agree  Not Sure  Disagree
APPENDIX E

PERFORMANCE EVALUATION FORM FOR MILDLY MENTALLY HANDICAPPED MIDDLE SCHOOL STUDENTS
PERFORMANCE EVALUATION FORM
FOR MILDLY MENTALLY HANDICAPPED
MIDDLE SCHOOL STUDENTS

School ________________________ Student # ____________

Name of Examiner __________________________

Directions:

Please circle your decisions for each section:
(circle number)

1. unacceptable
2. poor
3. acceptable (for twelve weeks of instruction)
4. very good
5. excellent

I. TECHNIQUE

A. Body position

1. body lengthened . . . . 1 2 3 4 5
2. body balanced . . . . 1 2 3 4 5

B. Instrument Position . . . . 1 2 3 4 5

C. Right Hand and Arm: Bow
Hold and Open String Bowing

1. shoulder 1 2 3 4 5
2. elbow . . . . . . . . . 1 2 3 4 5
3. wrist and hand . . . . . 1 2 3 4 5
4. fingers and thumb . . . 1 2 3 4 5
5. bow angle . . . . . . . 1 2 3 4 5
6. bow parallel to bridge . 1 2 3 4 5
II. MUSIC

Directions: Please circle your decisions: (circle number)

1. none
2. sometimes
3. most of the time
4. all of the time

A. Hot Cross Buns

1. correct notes . . . . . . 1 2 3 4
2. correct rhythms . . . . . 1 2 3 4
3. good intonation . . . . . 1 2 3 4
4. good tone . . . . . . . . . 1 2 3 4
5. steady tempo . . . . . . . 1 2 3 4
6. adequate right hand skills for twelve weeks of instruction (shoulder, elbow, wrist, hand, fingers, thumb, bow angle, bow parallel) . . . . 1 2 3 4
7. adequate left hand skills for twelve weeks of instruction (shoulder, elbow, wrist, hand, fingers, thumb). . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 2 3 4

B. Mary Had a Little Lamb

1. correct notes . . . . . . 1 2 3 4
2. correct rhythms . . . . . 1 2 3 4
3. good intonation . . . . . 1 2 3 4
4. good tone . . . . . . . . . 1 2 3 4
5. steady tempo . . . . . . . 1 2 3 4
6. adequate right hand skills 1 2 3 4
7. adequate left hand skills 1 2 3 4
C. Who's That Tapping

1. correct notes ... 1 2 3 4
2. correct rhythms ... 1 2 3 4
3. good intonation ... 1 2 3 4
4. good tone ... 1 2 3 4
5. steady tempo ... 1 2 3 4
6. adequate right hand skills 1 2 3 4
7. adequate left hand skills 1 2 3 4

D. Au Claire de la Lune

1. correct notes ... 1 2 3 4
2. correct rhythms ... 1 2 3 4
3. good intonation ... 1 2 3 4
4. good tone ... 1 2 3 4
5. steady tempo ... 1 2 3 4
6. adequate right hand skills 1 2 3 4
7. adequate left hand skills 1 2 3 4

III. EAR TRAINING

Directions: Please circle your decisions (circle number)

1. none
2. sometimes
3. most of the time
4. all of the time

A. Example I

1. correct notes ... 1 2 3 4
2. correct rhythms ... 1 2 3 4
3. good intonation ... 1 2 3 4
4. steady tempo ... 1 2 3 4

B. Example II

1. correct notes ... 1 2 3 4
2. correct rhythms ... 1 2 3 4
3. good intonation ... 1 2 3 4
4. steady tempo ... 1 2 3 4
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<th>Week</th>
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APPENDIX G

STUDENT EVALUATION CHARTS
# Student Evaluation Chart

**Lesson 8**  
**School B**

## Skills

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<th>Student</th>
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### Skill

1. Bow Hold
2. Shoulder Bowing
3. Numbers Game
4. Left Hand Position
5. Bowing on Open D String
6. Hot Cross Buns--Pizzicato
7. Mary Had a Little Lamb--Pizzicato
# Student Evaluation Chart

## Lesson 8

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<td>3. Open String Bowing</td>
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<td>4. Mary Had a Little Lamb—Singing fingerings—Moving Fingers</td>
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**Skill:**

1. Hot Cross Buns—Pizzicato
2. Hot Cross Buns—Bowed
3. Open String Bowing
4. Mary Had a Little Lamb—Singing fingerings—Moving Fingers
5. Mary Had a Little Lamb—Pizzicato in Playing Position
# Student Evaluation Chart

## Lesson 8

**Skills**

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**Skill:**

1. Hot Cross Buns—Singing Fingerings—Moving Fingers
2. Hot Cross Buns—Pizzicato—in Playing Position
## Student Evaluation Chart

### Lesson 9

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### Skill:

1. Instrument Hold
2. Bow Hold
3. Open String Bowing
4. Hot Cross Buns—Pizzicato in Playing Position
5. Mary Had a Little Lamb—Singing Fingerings—Moving Fingers
6. Mary Had a Little Lamb—Pizzicato—In Playing Position
### Student Evaluation Chart

#### Lesson 10

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**Skills:**

1. ♩♩♩♩ ♩♩ on Open Strings
2. Hot Cross Buns—Bowed
## Student Evaluation Chart

### Lesson 9

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### Skills:

1. Bow Hold
2. Bowing on Open Strings
3. Hot Cross Buns—Bowed
4. Mary Had a Little Lamb—Pizzicato—Playing Position
### Student Evaluation Chart

**Lesson 10**

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**Skills**

1. *Mary Had a Little Lamb*—Singing
   Fingerings—Moving Fingers

2. *Hot Cross Buns*—Bowed

3. 🎸 on Open Strings—Bowed

4. 🎸 on Open Strings—Bowed

5. *Mary Had a Little Lamb*—Pizzicato
Student Evaluation Chart

Lesson 9 School C

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Skills:
1. Hot Cross Buns—Pizzicato—Playing Position
2. Mary Had a Little Lamb—Singing the Fingerings
3. Bow Hold
4. Bowed on Open Strings
5. Bowed on Open Strings
## Student Evaluation Chart

### Lesson 10

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**Skill:**

1. **Hot Cross Buns**—Pizzicato—in Playing Position
2. **Hot Cross Buns**—Bowed
3. **Mary Had a Little Lamb**—Pizzicato—in Playing Position
### Lesson 10

#### Skills

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**Skills:**

1. ♭♭♭♭ --On Open Strings--Bowed
2. Hot Cross Buns--Pizzicato
3. Bow Hold
# Student Evaluation Chart

## Lesson 12  

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**Skill:**

1. 🎵🎵🎵🎵 On Open Strings--Bowed
2. 🎵🎵🎵🎵 On Open Strings--Bowed
3. Hot Cross Buns--Bowed
4. Mary Had a Little Lamb--Pizzicato
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**Skill:**

1. ♫♫♫♫ On Open Strings—Bowed
2. ♫♫♫♫♫ On Open Strings—Bowed
3. Hot Cross Buns—Bowed
4. Mary Had a Little Lamb—Pizzicato
# Student Evaluation Chart

## Lesson 12

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**Skill:**

1. Mary Had a Little Lamb--Bowed
## Student Evaluation Chart

### Lesson 11

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**Skill:**

1. ♫ ♫ ♫ ♫ On Open Strings—Bowed
2. ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ ♪ On Open Strings—Bowed
3. Hot Cross Buns—Bowed
4. Mary Had a Little Lamb—Pizzicato
# Student Evaluation Chart

## Lesson 11

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**Skill:**

1. ♫ ♫ ♫ ♫ ♫ On Open Strings—Bowed
2. ♫ ♫ ♫ ♫ ♫ On Open Strings—Bowed
3. Hot Cross Buns—Bowed
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**Skill:**

1. Mary Had a Little Lamb—Bowled
## Student Evaluation Chart

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**Skill:**

1. Hot Cross Buns—Bowed
2. Mary Had a Little Lamb—Bowed
3. Who's That Tapping—Bowed
4. Au Claire de la Lune—Bowed
### Student Evaluation Chart

**Lesson 20**

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**Skill:**

1. *Hot Cross Buns*—Bowed

2. *Mary Had a Little Lamb*—Bowed


4. *Au Claire de la Lune*—Bowed
### Student Evaluation Chart

#### Lesson 21

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**Skill:**

1. Bowing
2. Left Hand and Finger Placement
3. Hot Cross Buns—Bowed
4. Mary Had a Little Lamb—Bowed
5. Who’s That Tapping—Bowed
6. Au Claire de la Lune—Bowed
### Student Evaluation Chart

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APPENDIX H

STUDENT EVALUATION FORM
STUDENT EVALUATION FORM

Class C Beginning Strings
Student 1

1. Right Hand Skills
   a. Hot Cross Buns Bowed
   b. 

2. Left Hand Skills
   a. Hot Cross Buns--pizzicato
   b. Mary Had a Little Lamb--pizzicato

3. Ear Training Skills
   a.
   b.

4. Note Reading Skills
   a.
   b.

5. Music Performance Skills
   a. Pieces Learned
   b. Tone
   c. Intonation
   d. Musical sensitivity

6. Non-musical Goals (learning skills)
   a. Attention span
   b.
   c.

7. Social Behavior
   a. Follows directions
   b. Puts forth best effort
   c. Seeks help when needed
   d. Demonstrates proper instrument care
   e. Exhibits self-discipline
   f. Demonstrates positive rapport with peers
   g. Demonstrates positive rapport with teacher
   h. Appears to have positive self-image in string class

Date 4-16-85
Teacher Van Camp

Acceptable Unacceptable

Improved No Improvement

Acceptable Unacceptable
APPENDIX I
VIDEOTAPEING AND OBSERVATION
SCHEDULE
## Videotaping and Observation Schedule

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APPENDIX J

TEACHER EVALUATION FORM
# TEACHER EVALUATION FORM

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<th>Lesson Structure</th>
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<td>2. Student strengths used as supportive skills to improve deficient skills</td>
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<td>4. Rote Teaching Skills</td>
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<td>6. Approach to note reading</td>
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<td>8. Voice modulation</td>
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<td>9. Simple sentences</td>
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<td>10. Transitions between activities</td>
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<td>11. Facial expression</td>
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<td>1. Reinforcement of student behavior</td>
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**Evaluation Results:**
APPENDIX K

A String Music Curriculum

for Mildly Mentally Handicapped

Middle School Students

2nd edition
A STRING MUSIC CURRICULUM FOR
MILDLY MENTALLY HANDICAPPED
MIDDLE SCHOOL STUDENTS

by
Diana Van Camp

The Ohio State University
1986
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PHILOSOPHY

Music experiences are a vital part of the total education and development of every child (Taylor, 1982; Thompson, 1982). Music provides aesthetic experiences and enhances the quality of human life, is part of our cultural heritage, provides an outlet for creativity and self-expression, enhances personal and social growth, provides opportunities for success and a positive self-image, and has vocational and avocational value (Hoffer, 1983; National Committee, Arts for the Handicapped, 1980). Participation in music performance develops skills necessary for cognitive, affective, and psychomotor functioning (Nocera, 1979; Rosene, 1982).

An important function of the public school music program is to provide a variety of musical offerings, so that the aesthetic needs of every child can be met. A quality music curriculum is one that offers general music, a variety of vocal music, and a variety of instrumental music, including band and orchestra (Hoffer, 1983; Rosene, 1982).

Legislation has expanded the role of the school music program in meeting the aesthetic needs of every child. Public Law 94-142 of 1975 insures the right of every handicapped child to a free and appropriate education in the least restrictive environment. Therefore, if music is
part of the school curriculum, it must be offered to all children, including the mentally handicapped (Taylor, 1982; Nocera, 1979).

The American Association of Mental Deficiency (1973) defines mental retardation as "significantly sub-average general intellectual functioning (i.e. two or more standard deviations below the mean) existing concurrently with deficits in adaptive behavior, and manifested during the developmental period (birth through age 18)" (p. 11). Mildly mentally handicapped children are able to read, write, and use basic mathematics. As adults they have the potential of functioning independently on personal and social levels, and of being self-supporting (Lefrancios, 1982; Nocera, 1979).

Music experiences greatly enhance the growth and development of mentally handicapped (MH) children. The mentally handicapped child can have aesthetic experiences and develop musical sensitivity through listening to, performing, and creating music. Since music is an important part of our culture, music study can help the mentally handicapped child to better understand and appreciate his environment. Music lessons can provide an opportunity for each mentally handicapped child to develop his potential as a musician, and can aid the development of cognitive and psychomotor skills.
Music often provides success for mentally handicapped students who are less successful in other areas (Nocera, 1979). Group music lessons and social activities help mentally handicapped students develop important social relationships. Music provides an alternate means of self-expression for mentally handicapped students who do not verbalize well. Music has flexibility, therefore, music activities can include mentally handicapped children of differing abilities. For example, rhythms, notes, and even instruments can be simplified to accommodate the functioning level of every child.

Instrumental music is especially valuable to the development of the mentally handicapped child. Given the opportunity to play a musical instrument, the mentally handicapped child can develop the manual dexterity, control of movements in time and space, and the mental concentration necessary for future independent functioning and career opportunities (Alvin, 1976; Rosene, 1982). Educators agree that the function of education is the total development of every child. According to Public Law 94-142, the development of every child must include the mentally handicapped child. When instrumental music is offered to children in public schools, the mentally handicapped child must have an opportunity to participate in instrumental music lessons that are appropriate to his functioning level.
The String Music Curriculum for Mildly Mentally Handicapped Middle School Students was developed and field tested in the process of trying to determine the feasibility of string music instruction for the mildly mentally handicapped. The curriculum is offered here as a guide for implementing string programs for the mentally handicapped, with the hope that music teachers will be encouraged to provide string music instruction for these students. The curriculum does not provide methods and materials for mainstreaming MMH string students into regular strings and orchestra programs. The possibilities of mainstreaming should be addressed in future research.
Definitions

1. **Academic work and social behavior that is acceptable to the special education teacher.** No major behavior problems in class and a combination of A's, B's and C's in academic work.

2. **Concert.** A demonstration of the various instruments in string class, a demonstration of technical skills learned, and performance of several pieces.

3. **Concrete learning experiences.** Learning in which the student experiences concepts and skills through participation in specific activities, or through the use of visual aids and manipulative materials (Nocera, 1979).

4. **Chronological age.** An individual's total number of years and months since birth. (C.A.)

5. **Heterogeneous class.** A class in which four different orchestral stringed instruments are studied; the violin, viola, cello, and bass.

6. **Homogeneous class.** A class in which only one stringed instrument is studied; the violin, viola, cello, or bass.

7. **I.E.P.** The I.E.P. is the Individual Education Program written for each handicapped student. It includes clinical test scores, previous school records, development in motor, cognitive, psychosocial and educational areas, long range goals and teaching strategies, student strengths and weaknesses, recommended student activities, specific educational services to be provided, and strategies to measure the child's progress (Nocera, 1979; Suran and Rizzo, 1983).

8. **Individualized instruction.** Instruction in which the lesson objectives, activities, and teaching strategies are modified to meet the needs and abilities of individual students (Nocera, 1979).

9. **Learning skills.** Basic skills needed for learning, i.e., auditory, visual, motor, language, and social skills (Nocera, 1979).

10. **Learning styles.** The mode through which a child learns best; i.e., through listening (auditory), through seeing a visual representation of a concept (visual), through experiencing what is to be learned.
(kinesthetic, tactile), or through a combination of these modalities (Nocera, 1979).

11. **Mental age.** A measure of determined mental ability based on the child's scores on a series of tests ordered in difficulty at various age levels (M.A.) (Suran and Rizzo, 1983).

12. **Mildly mentally handicapped.** Those exceptional children who possess significantly sub-average general intellectual functioning (i.e. two or more standard deviations below the mean) existing concurrently with deficits in adaptive behavior that is manifested during the developmental period (birth through age 18). MMH (mildly mentally handicapped) is referred to by some authors as educable mentally handicapped (EMH), or developmentally handicapped, (DH) (American Association of Mental Deficiency, 1973).

13. **Task analysis.** The procedure of analyzing component tasks in a problem or subject area with a view to organize them in a hierarchical fashion. The hierarchy generally proceeds from the simplest to the most complex tasks, and is frequently based on the assumption that mastery of subordinate tasks is essential for the successful performance of subsequent tasks (Lefrancois, 1982, p. 385).
Goals of a String Program for MMH Students

According to his functioning level, each student will:

1. Participate in enjoyable and successful experiences involving string music.

2. Experience the aesthetic and expressive qualities of music through string music making.

3. Develop the ability to express himself creatively through string music performance.

4. Develop music understanding and skills.

5. Discover, perform, and appreciate string and orchestra music.

6. Develop his individual capacities in the areas of affective, psychomotor, and cognitive skills by playing and listening to string music.

7. Develop his potential as a musician and a string player.

8. Develop the ability to create and interpret music through string music experiences.

9. Develop a positive self-image through string skill achievement.

10. Develop self-discipline through string instrument practice.
LEVEL I: BEGINNING STRING CLASS

Program Structure

1. **Student participation.** Beginning string class is available to all MMH middle school students who have been recommended by their special education teacher on the basis of academic work and social behavior that is acceptable to the special education teacher, and who have no major physical or sensory impairments.

2. **Class size.** A maximum of six to eight students to ensure individualized instruction.

3. **Class structure.** Homogeneous and heterogeneous class structures are appropriate for MMH string students.

4. **Frequency of instruction.** String classes will meet a minimum of two times per week for a total of ninety minutes of instruction. If scheduling is feasible, three to five classes per week are recommended for student progress.
Course Objectives

According to his functioning level, each student will:

1. Demonstrate proper instrument care and maintenance;

2. Demonstrate basic right-hand skills (i.e., acceptable bow hold, detache stroke, direction changes, slurs, string crossings, acceptable tone quality);

3. Demonstrate basic left-hand skills (i.e., appropriate body posture, instrument playing position, hand frame, chromatic alterations);

4. Demonstrate basic ear training skills (i.e., ability to manipulate a pitch, match a pitch, play melodic fragments of four to eight notes and simple melodies in first position by rote, and play simple first position major scales and minor tetrachords by rote);

5. Demonstrate basic musicianship by observing dynamic markings, phrasing, and articulation;

6. Demonstrate note reading ability for first position (i.e., first position pitches in the keys of G, D, A, C);

7. Perform simple rhythms (i.e., these note values and rests in various combinations: \( \text{\textnumero} \text{\textnumero}\text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} \text{\textnumero} 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Right Hand Skills

1. Bow hold
   a. Violin/viola
      1. Knuckles curved in natural position over bow stick.
      2. Thumb tip touches bow where frog meets stick, thumb curved.
      3. Index finger contacts stick just below middle joint. First joint of middle finger is opposite thumb. First joint of ring finger touches stick, and fourth finger is curved on top of stick.

Sample Teaching Devices

1. Touch tip of thumb to first joint of middle finger to form a telescope. Look through telescope.
2. Touch tip of thumb to first joint of middle finger, raise first and fourth fingers to form a rabbit. Make rabbit chew by wiggling thumb and middle finger. Make rabbit flop his ears by moving little finger and index finger up and down.
3. Place pencil in telescope, drape fingers over pencil in proper bow hold position. Tap each finger.
4. Hold pencil in left hand; flop right hand on pencil. Wiggle thumb, touch thumb tip to pencil. Tap each finger.
5. Repeat 1-4 with bow.
6. Hold bow with left hand, place fingers and thumb on bow. Turn bow over, check thumb position.
7. Student lead steps to proper bow hold.
8. Lift and set bow on the string near bow's balance point. Teacher or neighbor checks bow hold.
1. Bow hold
   a. Violin/viola
      9. Hold bow in 12 o'clock position; rotate first and fourth fingers horizontally. Bow pivots on thumb, fingers and thumb relax.
   b. Cello/bass
      1. Knuckles curved in natural position over bow stick.
      2. Thumb tip touches bow where frog meets stick. Thumb curved.
      3. Hand is slightly pronated; little finger is over the stick.
      4. Bass: index finger is extended slightly and contacts stick midway between first and second joints.
      5. Bass: Little finger is touching the frog near dot.

2. Detache stroke
   a. Violin/viola
      1. Shoulder and upper arm relaxed.
      2. Elbow slightly lower than wrist.

Sample Teaching Devices

1. Start holding the bow at the balance point for greater relaxation.
2. See 1-9 bow hold teaching devices for violin/viola.
3. Repeat all teaching devices at the frog.
2. Detache stroke
   a. Violin/viola
      3. Elbow leads motion and is weighty.
      4. Elbow joint opens and closes.
      5. Wrist and fingers are flexible and react to motion of bow.
      6. Fingers pull bow
      7. Initially use middle third of bow only.
      8. Bow parallel to bridge
      9. Bow contact point: halfway between bridge and fingerboard.
     10. Bow hair flat on string.
     11. Fingers react.

Sample Teaching Devices
   3. Place bow on string; raise and lower elbow, stop at proper placement.
   4. Without bow, place left hand on right upper arm. Open and close elbow "gate".
   5. Stir the pot: Hold bow at twelve o'clock position, stir the pot for flexible arm.
   7. Push and Pull: For flexible fingers, hold bow in left hand, place right hand in proper bow hold at balance point. Push and pull fingers of right hand.
   8. Spider Crawl: Hold bow at 12 o'clock position, climb up and down stick with fingers of right hand.
  10. Drop and Lift: Hold bow at balance point, fingers and thumb curved. Drop hand from wrist joint,
2. Detache stroke

a. Violin/viola

Sample Teaching Devices

- fingers and thumb extended. Lift hand from wrist joint, fingers and thumb curved.

11. Rocking Game: Place bow on string, pivot bow back and forth from fingerboard to bridge. Stop where bow is parallel to bridge.

12. Play various rhythm patterns with continuous short detache strokes at the balance point. Wrist and fingers react as direction of bow changes.

13. Bow four quarter notes on each open string (mid bow).

14. Bow different rhythms on open strings using

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15. Bow open string accompaniments to songs.

b. Cello

1. Use lower half of bow.

2. Shoulder and upper arm relaxed.

3. Place bow on string near frog.

4. Upper arm leads motion.

1. See 1-15 sample teaching devices for violin/viola detache bowing.
2. Detache Stroke

b. Cello

5. Elbow hanging and weighty.

6. Elbow opens and closes slightly.

7. Wrist and fingers are flexible and react to friction of bow hair crossing the string.

8. Bow parallel to bridge


c. String Bass

1. Use lower half of bow.

2. Shoulder relaxed

3. Place bow on string near frog.

4. Arm hangs down, elbow slightly bent and relaxed.

5. Weight of arm rests on bow, bow sinks into string.

6. Natural swing of arm moves bow.

7. Motion from shoulder and back muscles.

8. Wrist and fingers are flexible and react to friction of bow hair crossing the string.

9. Bow parallel to bridge
10. Bow hair flat against string (As player becomes more advanced, bow is tilted slightly towards scroll)

3. Direction Changes

   a. Violin/viola, cello, bass

   1. Wrist and fingers react.

   2. Wrist and fingers flexible during bow change.

   3. Change from down bow to up bow near tip: base knuckles of hand are prominent, third and fourth fingers and thumb extended. Motion should not be exaggerated.

   4. Change from up to down bow near frog: hand is flattened slightly, third and fourth fingers and thumb are curved. Motion should not be exaggerated.

Sample Teaching Devices

   1. Push and Pull: See number 7 of violin detache teaching devices.

   2. Place fingers in proper bow hold position at the balance point; extend fingers downward towards floor, then curve fingers upward towards knuckles. (Left hand helps support bow)

   3. Bow extension game: Holding bow at 12 o'clock position stretch arm out from body in all directions and bring it back. (extends and curves fingers)

   4. Windshield wipers: See number 9 under violin/viola detache teaching devices.

   5. Spider crawl: See number 8 under violin/viola detache teaching devices.

   6. Pencil Bowing: Put pencil between bow hair and stick, bow on pencil, watch fingers react.

   7. Drop and lift: See
number 10 under violin/viola detache teaching devices.

8. Play rhythm patterns at the balance point. Let wrist and fingers react.

4. String Crossings
   a. Violin/viola

   1. Moderate tempo: Upper arm anticipates string crossing.

   2. Elbow raises for lower strings.

   3. Elbow lowers for higher strings.

   4. For faster motion: There is less upper arm motion, more wrist and finger motion.

   5. Fingers pull bow.

Sample Teaching Devices

1. Roll the bow: Roll bow silently across all strings by raising and lowering right elbow.

2. Roll bow, stop on each string, notice height of elbow.

3. Start down bow on lower string. Lower arm, play up bow on higher string.

4. Reverse above: Play down bow on higher string; raise arm, play up bow on lower string.

5. Play up bow on first note, then cross string and play down bow on second note.
4. String Crossings

a. Violin/viola

1. Upper arm anticipates string crossing. More subtle motion than for the violin and viola.

2. Elbow moves toward body for lower pitched strings.

3. Elbow moves away from body for higher pitched strings.

Sample Teaching Devices

6. Play half notes down bow on lower string. Think of pulling fingers.

7. Repeat numbers 1-4 teaching devices, and omit the rest. Arm moves in a continuous motion.

8. Use half notes, then quarter notes and eighth notes on teaching device number 8.


b. Cello/Bass

1. See numbers 1-10 of violin/viola teaching devices for string crossings.
4. For faster motion: There is less upper arm motion, more wrist and finger motion.

5. Fingers pull bow.

5. Slurs

a. Violin/viola
   1. Use middle third of bow

b. Cello/bass
   1. Use lower half of bow.

Sample Teaching Devices

1. Slur open string to first finger on every string.

2. Slur open string to major third above.

3. Slur two open strings, elbow leads. Cello

4. Slur major tetrachords. Cello
5. Slurs
   a. Violin/viola
   b. Cello/bass

Sample Teaching Devices

Left Hand Skills

1. Body Posture
   a. Violin/viola
      1. Body lengthened, poised, and balanced.
      2. Feet form a V shape, with the left foot slightly in front of the right foot.

Sample Teaching Devices

1. Grown an inch: stand up straight and tall.
2. Pull on an imaginary string that runs through the body to lengthen it.
3. Shrug shoulders to learn what not to do.
4. Walk to music, maintain correct posture.
5. Lean to the right and to the left for the feeling of motion and transfer of weight.
1. Body Posture

b. Cello

1. Body lengthened, student seated forward in chair.

2. Hips and feet are balanced and centered. Feet are 20-24 inches apart.

Sample Teaching Devices

1. From a standing position, practice sitting in a balanced position.

2. Pull an imaginary string to lengthen body while sitting.

3. While seated, sway from side to side, stop at balanced position.

1. Traditional Sitting Position

a. Start with student seated so that torso is lengthened. Body weight is balanced on both feet.

b. Left foot on rung of bass stool, right foot flat on floor.

6. Plant a tree (feet). Tree sways in the breeze.

Bend knees slightly.
1. Body Posture

2. Traditional Standing Position

a. Feet are slightly wider than ten and twelve o'clock, with weight balanced on both feet. Left foot forward.

2. Instrument Playing Position

a. Violin/viola

1. Instrument rests on shoulder, collarbone, and touches neck.

2. Button at end of instrument touches neck slightly to left of adam's apple.

3. Head is turned slightly to the left.

4. Chin on chin rest, edge of chin rest fits against jawbone.

5. Left foot, nose and scroll are lined up.

Sample Teaching Devices

1. Grow an inch to lengthen body

2. Place feet parallel to each other, move to correct position.

3. Sway from side to side, stop at a balanced position.

Sample Teaching Devices

1. Touch shoulder/collarbone area (the shelf) with right hand; place instrument on the shelf; repeat.

2. Touch adam's apple with right hand. Find button on end of instrument. Place instrument on shelf, button to left of adam's apple. Repeat.

3. Hold instrument on shelf with left hand. Touch back of left jawbone with right hand. Place chin so that jawbone fits chinrest.

4. Shrug shoulder and neck muscles, then relax.
2. Instrument Playing Position

a. Violin/viola

6. Neck and back muscles are relaxed.

Sample Teaching Devices

5. Numbers Game:

#1. Left hand on top left bout of instrument.

#2. Turn instrument upside down.

#3. Bring instrument to shoulder/collarbone

#4. Turn head, place chin on chin rest.

#5. Hold instrument without hands.

6. For correct angle and height of instrument, balance a small rubber ball on G and D strings near bridge.

7. Statue of Liberty:

a. Hold instrument in rest position

b. Simultaneously move left foot to side and raise instrument high, like a torch.

c. Place instrument in playing position.

d. Transfer instrument back and forth from torch position to playing position.

8. Instrument in playing position, swing arms to release tension in shoulders and to test support.

9. Casewalk: Student
b. Cello

1. Legs and chest support instrument.

2. Cello rests against chest and on insides of both thighs, in most cases slightly above the knee cap.

3. Instrument is turned slightly to right so that C peg is at rear of left ear.

4. Cello is balanced so that left hand is free.

Sample Teaching Devices

1. From balanced sitting position, bring cello to body. Check contact points.

2. Give cello a bear hug; sway from side to side.

3. Drop arms, balance cello between legs and chest.

4. Numbers game:

   #1. Left hand on upper left bout of instrument.

   #2. Sit down in balanced position.

   #3. Bring cello back to body.

   #4. Give cello a bear hug.

   #5. Drop arms, balance cello between legs and chest.

Shuttle Game: Silent shifting from first to fourth position on D and G stings for instrument hold and elbow placement.

stands erect, holds case above head, marches to music. (develops good posture and muscle support)
2. Instrument Playing Position

c. Bass

1. Traditional Sitting Position

a. left foot on rung of bass stool

b. bass rests diagonally back into belt buckle

c. left knee behind bass, body supports instrument

d. right foot flat on floor

e. body weight evenly distributed on both feet

f. body relaxed so weight can shift from side to side

2. Traditional Standing Position

a. Left knee slightly bent

b. Bass rests diagonally into belt buckle.

Sample Teaching Devices

1. From a balanced sitting position, bring bass to body, check contact points.

2. Balance bass for a moment without hands.

1. Numbers game:

#1. Left hand on left bout of instrument.

#2. Bring instrument back towards body.

#3. Adjust knees and legs.

#4. Balance bass for a moment without
c. Bass leans against body

d. Eyes are level with first finger A flat on G string.

3. First Position Hand Frame

   Sample Teaching Devices

   a. Violin/viola

1. Elbow is centered under instrument and rotates with string crossings.

2. Forearm and hand form a straight line.

3. Hand: Knuckles curve, hand leans slightly towards index finger, fingers curved over string, base of index finger brushes side of neck. Hand is balanced around third finger.

4. Thumb: Inside corner of thumb rests lightly on the neck near the thumb joint. Thumb is across from index finger, thumb knuckle is slightly curved outward.

#5. Put all four fingers down on one string.

1. Hold instrument in playing position, swing elbow. Stop at proper placement.

2. Left Arm Swing: Swing arm to pluck low and high pitched strings in first and middle positions.

3. Strum one or more strings with swinging motion of left arm.

4. Instrument in playing position, slide right hand along left hand and arm to check for straight line.

5. Bend wrist out, bend wrist in, stop at correct position.

6. Instrument in playing position, supported with right hand. Bring left hand up from hanging position. Place hand in natural hand shape on instrument.
3. First Position Hand Frame

a. Violin/viola

Sample Teaching Devices

7. Tap four fingers simultaneously in first position on each string.

8. Pluck fourth finger on all strings in fourth position (rotate elbow)

9. Pluck open string accompaniments to songs using third and fourth fingers of left hand.

10. Shuttle game: Instrument in playing position, right hand holding instrument, shift left hand back and forth between first and middle positions. Pluck third and fourth fingers.

11. Tap and release third finger.

12. Tap thumb lightly on neck.

13. Slide thumb back and forth on neck, stop opposite index finger.

14. Paint a face on first finger. Finger angle is correct when both eyes of face are seen. Press and release string many times.

15. Brush index finger back and forth on side of neck for relaxation.

16. Tap each finger lightly on string.
3. First Position Hand Frame

a. Violin/viola

Sample Teaching Devices

17. Tunnel pizzicato: Put all fingers down on string. Pluck string under tunnel.

18. Major and minor tetrachords on each string.

19. Simple melodies in keys of D, G, C, A, (cello and bass stay on A string for key of A)

20. One octave major scales in the keys of D, G, C, all instruments. Key of A, violin/viola only.

21. Daily home practice with practice cassette tapes of tunes to be learned.

b. Cello

1. Elbow is lower than hand, away from the body, several inches lower than shoulder.

2. Forearm and hand form a straight line.

3. Hand forms a "C" shape, knuckles are curved. Hand leans slightly back towards index finger, fingers over string.

1. See violin/viola hand frame teaching devices #2, 3, 5, 7, 8, 9, 10, 12, 16, 17, 18, 19, 20, and 21.

2. Instrument in playing position, bring left hand up from hanging position. Place hand in natural handshape on instrument.

3. Tap and release third and fourth fingers.

4. Slide thumb back and forth on neck, stop opposite second finger.
3. First Position Hand Frame

b. Cello

4. Thumb pad touches back of neck, opposite the second finger.

5. Fingers are diagonally on string and functional; finger pad touches string.

Sample Teaching Devices

5. Stretch left arm out to side, bring arm back and forth to proper hand position.

6. Make a light fist: knock up and down the fingerboard.

7. Make a train (left hand shape). Slide train up and down the fingerboard.

8. Ski slope: slide all fingers down string to bridge; pluck string with third finger.

9. Tap bridge and nut several times to find left arm position.

c. Bass

1. Elbow is slightly lower than shoulder, away from body.

2. Wrist is curved slightly.

3. Hand is balanced around second and third fingers, fingers curved over string.

4. Thumb pad touches back of neck, opposite second finger.

5. Fingers: First finger points towards scroll, side of finger touches string.

1. See violin/viola hand frame teaching devices #s 2, 3, 5, 7, 8, 9, 10, 12, 16, 17, 18, 19, 20, and 21.

2. Instrument in playing position, bring left hand up from hanging position. Place hand in natural handshape on instrument.

3. Tap and release third and fourth fingers.

4. Slide thumb back and forth on neck, stop opposite second finger.

5. See cello hand frame teaching devices #s 5, 6, 7, and 8.

6. Place fingers of left
Second and third fingers are curved and square. Fourth finger points towards bridge. Finger pads touch string.

hand on raised right forearm. Practice sinking weight of left arm into right forearm.

7. Sink into string and release. (use bass)

8. Sink into string and release without thumb.

4. Chromatic Alterations

Sample Teaching Devices

a. Violin/viola

1. Use low second finger or high second finger on each string for major and minor tetrachords.

1. Play major tetrachords by ear.

2. Play major tetrachords from line notation.

3. Play simple melodies with major tetrachords.

4. Slide fingers independently-low two to high two.

5. Play minor tetrachords by ear.

6. Play minor tetrachords from line notation.

7. Play simple melodies with minor tetrachords.

b. Cello

1. Alternate second and third fingers on each string for major and minor tetrachords.

1. See violin/viola chromatic alterations #s 1-3, teaching devices.
4. Chromatic Alterations

b. Cello

Sample Teaching Devices

2. Change back and forth from second to third fingers, i.e., c to c#. 

3. See violin/viola chromatic alterations #s 5-7, teaching devices.

c. Bass

1. Alternate second and fourth fingers on each string for major and minor tetrachords.

1. See violin/viola chromatic alterations #s 1-3, teaching devices.

2. Change back and forth from second finger to fourth finger, i.e., c to C#.

3. See violin/viola chromatic alterations #s 5-7.

Ear Training Skills

1. Ability to match a rhythm pattern

1. Echo clap a three or four note rhythm pattern of d, d, and d notes.
Ear Training Skills

1. Ability to match a rhythm pattern

2. Ability to match a pitch played in simple rhythm patterns, pizzicato or arco.

Sample Teaching Devices

2. Match the rhythm only of a three or four note pattern of $\frac{3}{4}$, $\frac{1}{4}$, and $\frac{3}{4}$ notes played on an open string. Use pizzicato or arco.

3. Match a six note rhythm pattern of $\frac{3}{4}$ and $\frac{3}{4}$ notes played on an open string. Use pizzicato or arco.

1. Match an open string pitch played pizzicato. Use banjo position for violin/viola, then playing position.

2. Match open string repeated notes played in a four note pattern of $\frac{3}{4}$, $\frac{1}{4}$, and $\frac{3}{4}$ notes.

3. Match open string repeated notes played in a six note pattern.
Ear Training Skills

3. Ability to match a four to eight note melodic fragment.
   a. Match a four note fragment with some repeated notes and one skip; pizzicato and arco
   b. Match a four note fragment with no skips and some repeated notes; pizzicato and arco
   c. Match a five or six note melodic fragment using one skip and some repeated notes; pizzicato and arco.

Sample Teaching Devices

1. Match open string pitches of a four note melodic fragment with adjacent string crossings.
   a. b.

2. Match four consecutive pitches using fingered notes on the D or A strings.
   a. b.

3. Match a six note fragment on adjacent open strings.
   a. b.

4. Match a six note fragment using fingered notes on one string.
   a. b.
Ear Training Skills

4. Ability to Manipulate a pitch

5. Ability to play major and minor tetrachords by ear; pizzicato or arco.

Sample Teaching Devices

1. Side from c natural to c sharp, f natural to f sharp. (violin/viola)

2. Adjust intonation: make a note slightly higher or lower, (all instruments)

1. Match the A major tetrachord played in quarter notes.

2. Match the A major tetrachord played in various simple rhythms of quarter notes.

3. Match the a minor tetrachord played in quarter notes.

4. Match the a minor tetrachord played in various simple rhythms.

6. Ability to play short simple melodies in first position by ear.

1. Sing melodies with words and fingerings
Ear Training Skills

Rote Instruction to Note Reading

1. Rote instruction
   a. Begin with simple songs of four to six measures.
   b. Use keys of G, D, C, and A major.
   c. Begin with three or four songs with no string crossings.

Sample Teaching Devices

2. Match very short fragments.

3. For short melodies, play whole melody several times; have students join in as they are able.

4. Use much repetition and a moderate tempo.

5. Examples: Hot Cross Buns, Mary Had a Little Lamb, Au Claire de la Lune.

Sample Teaching Devices

1. Have students sing melody several times.

2. Prepare line notation of song with color-coded fingerings that match tapes on instrument.

3. Have students sing melody with fingerings. Example: "Hot Cross Buns" sing

   \[
   \begin{array}{c|c}
   \hline
   3 \times 2 \times 1 \times 0 \times 2 \times 0 \times 2 \\
   \hline
   \end{array}
   \]

4. Have students sing melody with fingerings while touching appropriate finger of left hand to thumb tip. Open is signified by the hand in a "C" shape.
**Rote Instruction to Note Reading**

1. **Rote instruction**

**Sample Teaching Devices**

5. Have students pluck melody on their instruments, while teacher sings fingerings.

6. Have students pluck melody on their instruments while singing fingerings.

7. Have students bow song while watching line notation.

8. Repeat these steps several times.

9. After approximately twelve to eighteen lessons, introduce standard notation with color-coded fingerings.

"Hot Cross Buns"

![Musical notation for Hot Cross Buns]

**2. Transition Stage**

a. Students begin learning standard notation

1. After twenty-four to thirty-six lessons, begin using flash cards to teach standard notation. (i.e. pitches, note values, the staff, dynamics, tempo markings)

2. During the next twenty-four to thirty-six lessons, continue to teach melodies by ear and by color-coded fingerings,
Rote Instruction to Note Reading

3. Note Reading

a. Pre-requisites:

1. Right and left hand formats are established.

2. Some independence of hands is established, i.e., slurring two or four notes on a bow.

3. Ear Training: student can play melodic fragments by ear, manipulate a pitch and find landmark pitches.

Sample Teaching Devices

1. Have students play open strings and successive pitches on one string from standard notation; first with marked fingerings, and then without. Use simple rhythms.

2. Have students play major and minor tetrachords on each string from notation.

3. Continue drill with flash cards.

4. Learning songs from notation begins at Level II.

4. Level One Note Reading to include:

a. Some pitches in first position in the following keys: G, D, A, and C major.

b. These note values and rests in various combinations:

\[ \begin{array}{cccc}
& \cdot & \cdot & \cdot \\
\hat{ \text{ } } & \hat{ \text{ } } & \hat{ \text{ } } & \hat{ \text{ } }
\end{array} \]
Musical Events for the Year

1. Fall concert of four or five folk songs to be performed for the special education class during school hours.

2. Holiday party/concert for special education string players and their parents. (play folk songs, add Jingle Bells).

3. February concert: Perform for a special education class at another school.

4. Spring concert: perform several selections as a class for the music department's spring concert. Invite string students in the school orchestra to assist the special education string class.

5. String Ensemble Option: During the second semester of instruction, the first level string class will join the second level string class to form a string ensemble. The ensemble will rehearse during school hours and perform on one concert.

6. Students will attend a minimum of one professional string music concert sponsored by the school.

7. Students will attend a school orchestra rehearsal.

Social Events for the Year

1. Fall party for special education string players and their parents to introduce the string program. Level II class (intermediate class) would perform.

2. Students will have lunch out after the February concert.

3. Spring picnic for special education string players.
IMPLEMENTATION

To implement a string program for mildly mentally handicapped students, instrumental music teachers must be:
1) knowledgeable of the characteristics of mildly mentally handicapped students, 2) able to structure learning tasks for them, 3) able to develop appropriate lesson plans and demonstrate appropriate delivery skills, 4) able to select suitable music materials, 5) able to structure appropriate string music lessons, and 6) able to evaluate student and teacher performance.

Characteristics of Mentally Handicapped Students
and the Implications for Music Teaching

Mildly Mentally Handicapped Children:

1. Develop concepts in the same order and stages as normal children, only later
2. Have a slow rate of learning
3. Have a short attention span
4. Have a short memory
5. Have difficulty in verbalizing concepts
6. Are slow to master language skills
7. Have difficulty generalizing
8. Have only limited ability to abstract
9. Have social problems when expected to function beyond their abstracting ability (Cartwright, Cartwright, and Ward, 1981; Nocera, 1979; Suran and Rizzo, 1983)
Learning Tasks for the Mildly Mentally Handicapped Student

Should:

1. Be brief and sequentially presented;
2. Proceed in small steps;
3. Be success-oriented, yet challenging enough to promote growth;
4. Include more repetition than lessons for other children;
5. Contain concrete learning experiences such as learning to hold the bow by modeling the instructor;
6. Be activity-oriented and contain a wide variety of activities;
7. Cover less material than lessons for other children;
8. Include more rote learning than lessons for other children;
9. Be structured according to the process of Task Analysis.

"Task Analysis involves breaking down learning tasks into their component parts so that skills involved in performing the task can be identified" (Cartwright, Cartwright, and Ward, 1981, p. 395).

a. The Teacher should:

1. identify skills or behaviors to be learned;
2. break down skills into a series of sub-skills that are easy to teach;
3. sequence sub-skills from easiest to most difficult, "or in the natural order in which they must be performed" (Heward and Orlansky, 1984, p. 95);
4. frequently evaluate student responses to instruction;
5. individualize instruction according to evaluation results (Heward and Orlansky,
b. Methods of Task Analysis (Moyer and Dardig, 1978)

1. Method I: "Watch a Master Perform"

The analyst watches a master perform a task, and writes down all the steps in correct order. This method is especially effective with psychomotor tasks.

2. Method II: Variation of Method I

The analyst performs the task himself, verbalizing and tape recording each sub-step. He then performs the task again to see if all the sub-steps are accurate.

3. Method III:

The analyst works backward from the completed task (terminal objective) to obtain sub-steps or sub-skills.

4. Method IV: Brainstorming

The analyst writes down all the sub-tasks involved in a particular goal without regard to any order. Then tasks are re-arranged in as logical an order as possible (Moyer and Dardig, p. 17).

5. Method V: This method is most successful with goals.

a. Write the goal on paper.

b. List the observable behaviors a person would exhibit to show that he or she has obtained the goal.

c. Review the list, discarding those behaviors that should not be included and identifying those that need clarification.

d. Describe what is intended for each goal on the list by determining how frequently or how well the behavior must be performed.
Test the statements for adequacy and completeness by determining whether the behaviors in the final list represent comprehensive attainment of the goal (Moyer and Dardig, p. 17).

Teacher Competencies:

In order to provide appropriate string music lessons for mildly mentally handicapped students, the music teacher should have specific competencies and knowledge.

1. **Teacher preparation:** The special music education string teacher should:

   a. Be a competent musician and music educator.

      1. have comprehensive music and music education training (Nocera, 1979);

      2. have the ability to improvise and compose expressive music for special education experiences (Graham, 1975);

      3. understand the basic characteristics of the mildly mentally handicapped child and the implications of these characteristics to music education (Graham, 1975);

      4. be aware of music materials especially designed or adaptable for teaching music to mildly mentally handicapped children (Graham, 1975);

      5. have appropriate string instrument performance and pedagogy skills.

   b. The special music education string teacher should have some pre-service or in-service training in special education or special music education such as:

      1. Workshops concerning music education for mentally handicapped students.

      2. College and university courses in special education and music education for the mentally handicapped.
3. Supervised field experiences in special education or music education for the mentally handicapped.

4. The special music education string teacher should have access to trained professionals in the field of special education for purposes of consultation.

2. **Essential Knowledge and Strategies:** The special music education string teacher should:

   a. Acquire information about each student that will aid the development of goals and lessons such as:

      I.Q.
      Gross motor skills
      Language skills
      Fine motor skills
      Auditory skills
      Visual abilities
      Mental age
      Social skills
      Abstracting ability
      Level of academic ability, especially in the areas of reading and computation.

      This information is usually found in the student's Individual Education Program (I.E.P.).

   b. Know each child's strengths and weaknesses.

   c. Work closely with the special education teacher and other staff members involved with special learners.

   d. Set short-term, intermediate, and long-range goals for each student.

   e. Devise sequential instructional objectives.
f. Devise teaching strategies that will create an optimum learning environment.

g. Design lessons so that the special learner is able to improve deficient learning skills (i.e., auditory, visual, motor, language or social) while achieving music goals.

h. Be aware of individual learning styles such as auditory, visual, and kinesthetic.

i. Individualize instruction.

j. Plan activities to help students generalize new learning.

k. Speak in simple sentences.

l. Praise students as often as possible.

m. Be willing to accept and reinforce small steps in the learning process.

n. Evaluate student skill level at the end of every lesson to determine the success of lesson objectives.

o. Modify teaching strategies or change them as student progress indicates.

p. Evaluate his/her teaching frequently.

Methods of Student Reinforcement: Mildly Mentally Handicapped Students Need Several Kinds of Reinforcement:

1. Verbal praise, positive facial expressions, smiles. Frequency: every lesson

2. Charts that show student achievement for each skill. Frequency: every lesson

3. Tangible rewards for skill achievement, or a Wendy's certificate. Frequency: once every two or three weeks

4. Award pin for completing a course of study. Frequency: once or twice a year

5. Plaques or certificates for outstanding achievement. Frequency: once or twice a year.
Lesson Plans Should Include:

1. Musical goals that challenge the student just enough to promote growth.

2. A combination of musical and non-musical goals, i.e., goals for improving deficient learning skills.

3. Composing, performing, and listening.

4. Activities that develop right hand skills, left hand skills, and ear training skills.

5. Opportunities for success in every lesson.

Music

1. Should be appropriate for the chronological age of the student.

2. Should have a skill level compatible with the mental age of the student.

3. Must illustrate very clearly the concepts being taught.

4. Must be of the highest musical quality in order to accommodate repetition.

5. Recommended Music Selections

   Hot Cross Buns
   Short Melody in D (Rolland)
   Mary Had a Little Lamb
   Who's That Tapping at My Window
   Scotland's Burning
   Short melody in A (Rolland)
   Au Claire de la Lune
   English Folk Song (Matesky)
   Go Tell Aunt Rhody
   French Folk Song (first half)
   O Come Little Children (first half)
   Twinkle Twinkle Little Star
   Chopsticks (first half)
   Jingle Bells
   Lightly Row
   Old MacDonald
   London Bridge
   Reuben and Rachel
   For Health and Strength
   When the Saints Go Marching In
Skip to My Lou Variations (Rolland)
Teacher composed or improvised melodies

6. **Recommended Sources of Music**


**General Music Textbooks**

**Hymns**

**Folk Songs**

Teacher composed or improvised melodies

**Materials**

1. **Beginning Instruction Booklet**: compiled for each child by the teacher, to contain the following:

   a. Line notation with color-coded fingerings for each piece learned.

   b. Standard notation with color-coded fingerings for each piece learned.

   c. "Reading from notation" section containing melodic fragments with and without color-coded fingerings.
2. A set of flash cards containing music symbols and standard notation.

3. Large charts of line notation with color-coded fingerings.

4. Four different brightly colored rolls of tape to mark finger placement on fingerboards.

Instrument Practice

1. Students should be encouraged to practice at home whenever possible. Cassette tapes with songs and lessons to be learned are a valuable practice tool and provide an incentive to practice.

2. If students are unable to take instruments home, a supervised practice time within the school day is a desirable alternative.

Facilities and Equipment

1. Each student will need an appropriate size instrument, bow, rosin, and case. Most mildly mentally handicapped middle school students will use a full size instrument.

2. The music room should have proper lighting, ventilation, and all the conditions conducive to quality teaching and learning.

3. The music room should have an adequate number of stands and chairs, a chalk board with chalk, a cassette tape recorder and tapes, and a record player.
Sample Lesson Plans

The sample lesson plans provided represent the first six lessons of the original project. Some classes were not able to complete every lesson objective during the forty-five minutes of instruction. Therefore, the sample lesson plans are intended to serve as a guide for structuring string music lessons for mildly mentally handicapped students. The amount of material covered during each lesson will depend on student ability level, length of lesson, and the expertise of the instructor. The researcher chose a forty-five minute lesson on the basis of the chronological age of the student (age 13-15), and the brevity of the instruction period (twelve weeks).

Class Beginning Strings Lesson Number 1 Date

Objectives: According to his functioning level, the student will:

1. Practice auditory, visual, language, motor, and social skills.
2. Demonstrate proper bow hold.
3. Demonstrate proper body posture and instrument hold.
4. Name parts of the instrument.
5. Match simple rhythms by plucking on an open string.
6. Sing Hot Cross Buns with words.
Procedures:

1. Getting acquainted: Teacher and students will exchange information about their musical and life experiences.

2. The teacher will demonstrate proper care of instruments and name parts of instruments.
   a. Students will name parts of instruments.

3. Right Hand Skills
   a. Bow Hold
      1. Teacher will model telescope.
      2. Students will form a telescope with thumb and first joint of middle finger, then look through the telescope.
      3. Teacher will model pencil bow hold.
      4. Students will: Form a telescope, place pencil in telescope, and drape fingers over pencil in proper bow hold position. They will tap each finger against pencil.
      5. Teacher will check each student for proper pencil hold.
      6. Teacher will repeat all procedures with bow.

4. Left Hand Skills
   a. Body Posture
      1. Teacher will model correct posture for each instrument, and all teaching devices.
      2. Students will: Grow an inch to lengthen body.
3. Students will: Lean to the right and left for motion and transfer of weight.

b. Instrument Playing Position

Teaching Devices

1. Teacher will model proper instrument hold for each instrument and all teaching devices.

2. Students will: (violin/viola) line up left foot, nose, and scroll.

3. Students will: (cello) give cello a bear hug for instrument position.

4. Students will model numbers game for their instrument.

5. Teacher will check and adjust student instrument positions.

5. Ear Training Skills

a. clapping and plucking simple rhythms

b. learning a song by rote (singing)

Teaching Devices

1. Teacher will clap various simple rhythms.

2. Students will: echo clap various simple rhythms.

3. Teacher will pluck rhythms on an open string.

4. Students will match rhythms by plucking an open string.
5. Teacher will sing Hot Cross Buns with words.

6. Teacher will sing song again, students will join in where there are able.

Sample Lesson Plan

Class Beginning Strings Lesson Number 2 Date ______

Objectives: According to his functioning level, the student will:

1. Practice auditory, visual, language, motor and social skills.

2. Name parts of the instrument.

3. Demonstrate proper bow hold.

4. Demonstrate proper body posture and instrument hold.

5. Match open string pitches plucked in half notes.

6. Sing Hot Cross Buns with words.

7. Sing Hot Cross Buns with instrument fingerings.

 Procedures:

1. Right Hand Skills

   a. Review bow hold

   Teaching Devices

   1. Teacher will model steps to proper bow hold and all teaching devices.

   2. Student will: Make a rabbit with thumb and first joint of middle finger. He will make the rabbit chew by wiggling thumb and middle finger. He will make the rabbit flop his ears by moving
2. Left Hand Skills
   a. Name parts of instrument
   b. Body Posture-review
   c. Instrument Hold-review

Teaching Devices

1. Teacher will review parts of the instrument.
2. Students will name instrument parts.
3. Teacher will model proper body posture and all teaching devices.
4. Students will pull string through center of body to lengthen it.
5. Students will do casewalk as they practice proper posture.
6. Teacher will check each student for proper posture.

1. Teacher will model numbers game.
2. Students will participate in numbers game.
3. Individual students will lead numbers game.
Ear Training Skills

a. Match open string pitches plucked in half notes.

b. Sing Hot Cross Buns with words, then fingerings.

Teaching Devices

1. Teacher will pluck open string pitches in half notes (banjo style, violin/viola).

2. Students will match open string pitches plucked in half notes.

3. Teacher will sing Hot Cross Buns with words.

4. Teacher and students will sing Hot Cross Buns.

5. Teacher will sing Hot Cross Buns with fingerings, students will model.

Sample Lesson Plan

Class Beginning Strings Lesson Number 3 Date _______

Objectives: According to his functioning level, each student will:

1. Practice auditory, visual, language, motor, and social skills.

2. Demonstrate proper bow hold.

3. Demonstrate proper lower arm bowing motion.

4. Demonstrate proper posture and instrument hold.

5. Demonstrate proper left hand position.

6. Sing fingerings to Hot Cross Buns while manipulating appropriate fingers of left hand.

7. Name and pluck open strings.

8. Echo pluck quarter notes on an open string.

9. Echo pluck simple rhythms on an open string.
### Right Hand Skills

1. **Practice Bow hold-review.**
2. **Bowing from the lower arm.**

### Left Hand Skills

1. **Instrument hold**
2. **Left Hand Frame**
3. **Hot Cross Buns**

### Teaching Devices

1. The teacher will model the Rabbit and all teaching devices.
2. **Students will place Rabbit on bow.**
3. **Students will tap each finger of bow hold.**
4. **Students will bow shoulder bowing.**
5. **Students will play the rocking game.**

1. **Students will lead numbers game.**
2. **Students will tap fingers on each string.**
3. **Students will pluck string under tunnel.**
4. **Students will sing fingerings to Hot Cross Buns.**
5. **Students will sing fingerings and manipulate fingers of left hand for Hot Cross Buns.**

### Ear Training Skills

1. **Learning names and sounds of open strings.**

### Teaching Devices

1. **Teacher will model playing and naming each open string, pizzicato, and all teaching**
281

devices.

2. Students will play four quarter notes on an open string, pizzicato (echo).

3. Students will play different combinations of quarter and eighth notes on open strings, pizzicato (echo).

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Sample Lesson Plan

Class Beginning Strings Lesson Number 4 Date ______

Objectives: According to his functioning level, each student will:

1. Practice auditory, visual, language, motor, and social skills.

2. Demonstrate proper lower arm bowing motion.

3. Demonstrate flexible bow hold exercises.

4. Demonstrate proper instrument hold.

5. Demonstrate proper left hand frame.

6. Play different rhythms on open strings, pizzicato (echo)

7. Play Hot Cross Buns on their various instruments, pizzicato (violin/viola banjo style)

Right Hand Skills Teaching Devices

1. Bowing from the lower arm (middle of bow)

1. The teacher will model shoulder bowing and all teaching devices.

2. Left hand frame

2. Students will perform shoulder bowing.

3. Students will tap on each string, all four fingers simultaneously.
4. Students will play strings under tunnel, pizzicato.

5. Students will tap thumb.

Left Hand Skills

2. Left hand frame

Teaching Devices

6. Students will sing fingerings to Hot Cross Buns.

7. Students will play Hot Cross Buns on instrument, pizzicato, (violin/viola banjo style).

Ear Training

1. Matching repeated open string pitches on various rhythms (three or more notes)

Teaching Devices

1. The teacher will play and the students will echo various rhythms played on open strings, pizzicato

\[ \text{Note symbols here} \]

Sample Lesson Plan

Class Beginning Strings Lesson Number 5 Date _____

Objectives: According to his functioning level, each student will:

1. Practice auditory, visual, language, motor, and social skills.

2. Demonstrate flexible bow hold exercises.

3. Demonstrate proper bowing on open strings in middle of bow.

4. Demonstrate proper instrument hold.

5. Demonstrate proper left hand frame.

6. Play Hot Cross Buns, pizzicato in playing position.
7. Echo various rhythms on open strings, pizzicato.

<table>
<thead>
<tr>
<th>Right Hand Skills</th>
<th>Teaching Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Flexible bow hold</td>
<td>1. The teacher will model tapping fingers of bow hold and all teaching devices.</td>
</tr>
<tr>
<td></td>
<td>2. Students will tap fingers of bow hold.</td>
</tr>
<tr>
<td>2. Bowing on open strings</td>
<td>3. Students will perform rocket blast off.</td>
</tr>
<tr>
<td>middle of the bow</td>
<td>4. Students will perform stir the pot.</td>
</tr>
<tr>
<td></td>
<td>5. Students will perform elevator game.</td>
</tr>
<tr>
<td></td>
<td>6. Students will perform push and pull.</td>
</tr>
<tr>
<td></td>
<td>7. Students will perform shoulder bowing</td>
</tr>
<tr>
<td></td>
<td>8. Students will perform quarter notes on open strings, arco.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left Hand Skills</th>
<th>Teaching Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instrument hold</td>
<td>1. The teacher will model numbers game and all teaching devices.</td>
</tr>
<tr>
<td></td>
<td>2. Students will perform the numbers game.</td>
</tr>
<tr>
<td>2. Left hand frame</td>
<td>3. Students will tap fingers on strings.</td>
</tr>
<tr>
<td></td>
<td>4. Students will perform the shuttle game.</td>
</tr>
<tr>
<td></td>
<td>5. Students will perform tunnel pizzicato--play string under tunnel.</td>
</tr>
<tr>
<td></td>
<td>6. Students will name strings and play four</td>
</tr>
</tbody>
</table>
Ear Training Skills

1. Matching repeated open string pitches on various rhythms (three or more notes)

Teaching Devices

1. The teacher will play and the student will echo various rhythms played on open strings, pizzicato.

\[ \text{\begin{array}{cccc} & \text{\ding{55}} & \text{\ding{55}} & \text{\ding{55}} \\
\text{\ding{55}} & \text{\ding{55}} & \text{\ding{55}} & \text{\ding{55}} \end{array}} \]

Sample Lesson Plan

Class Beginning Strings Lesson Number 6 Date ______

Objectives: According to his functioning level, each student will:

1. Practice auditory, visual, language, motor, and social skills.

2. Demonstrate flexible bow hold.

3. Demonstrate proper bowing on open strings, in middle of bow.

4. Demonstrate proper instrument hold.

5. Play Hot Cross Buns in playing position, pizzicato.

6. Echo simple rhythms on open strings and on D string with first and second fingers.

7. Demonstrate proper left hand frame.
### Right Hand Skills

1. **Flexible bow hold**

2. **Bowing in middle of bow**

### Teaching Devices

1. The teacher will model rocket blast off and all teaching devices.

2. Students will perform rocket blast off.

3. Students will stir the pot.

4. Students will perform shoulder bowing.

5. Students will bow on open strings in middle of bow, four quarter notes.

### Left Hand Skills

1. **Instrument hold**

2. **Left hand frame**

### Teaching Devices

1. The teacher will model numbers game and all teaching devices.

2. Students will perform numbers game.

3. Students will tap all fingers on each string.

4. Students will perform tunnel pizzicato.

5. Students will perform shuttle.

6. Students will play Hot Cross Buns in playing position, pizzicato.

### Ear Training Skills

1. **Match pitches in three and four note patterns on open strings and with fingered notes on the D string.**

### Teaching Devices

1. The teacher will play and the student will echo three and four note patterns of using open D string and first and second fingers on D (violin),
2. Learn a new song by rote (pizzicato) (1-3 cello, 1-4, Bass).

2. The teacher will play and the students will echo three and four note patterns of ♭♭ and ♭♭♭♭♭ notes on the open strings, pizzicato.

3. The teacher will model and the students will sing Mary Had a Little Lamb.
The teacher should evaluate student behavior and skill level frequently to determine each student's progress toward course objectives. Objectives and teaching strategies should then be modified or changed as student progress indicates.

Student Evaluation Form

Class ___________________________ Date __________________

Student _____________________________ Teacher _____________

Rating Scale: 5-excellent, 4-very good, 3-acceptable, 2-improving, 1-improvement needed

1. Right hand skills
   a. _______________________________________
   b. _______________________________________

2. Left hand skills
   a. _______________________________________
   b. _______________________________________

3. Ear training skills
   a. _______________________________________
   b. _______________________________________

4. Note reading skills
   a. _______________________________________
   b. _______________________________________

5. Music performance skills
   a. Pieces learned _______________________
   b. Tone _______________________________
   c. Intonation __________________________
   d. Musical sensitivity (dynamics, expression) ______
6. **Non-musical goals**
   (learning skills)
   a.  
   b.  
   c.  

7. **Social behavior**
   a. Follows directions  
   b. Puts forth best effort  
   c. Seeks help when needed  
   d. Demonstrates proper instrument care  
   e. Exhibits self-discipline  
   f. Demonstrates positive rapport with peers  
   g. Demonstrates positive rapport with teacher  
   g. Appears to have positive self-image in string class  

**Evaluation Results:** New or modified objectives/strategies
To insure quality teaching and learning, the special education music teacher must frequently evaluate his/her teaching. This sample evaluation form may be used for self-evaluation of tape-recorded or videotaped lessons, or for observations by peers.

**Teacher Evaluation Form**

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Teacher</th>
</tr>
</thead>
</table>

**Rating Scale:** 5-excellent, 4-very good, 3-acceptable, 2-improving, 1-improvement needed.

**Lesson Structure**

<table>
<thead>
<tr>
<th>Score</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Sequential and in small steps __________
2. Student strengths used as supportive skills to improve deficient skills __________
3. Concrete learning experiences __________
4. Activity-oriented __________
5. Rote activities __________

**Musical Knowledge and Skills**

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

1. Right hand skills __________
2. Left hand skills __________
3. Ear training skills __________
4. Rote teaching skills __________
5. Repertoire selection __________
6. Approach to note reading __________
7. Piano playing and singing skills __________

**Delivery**

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

1. Clear instructions __________
2. Eye contact and proximity __________
3. Energy level __________
4. Positive reinforcement __________
5. Pacing __________
6. Grammar __________
7. Enunciation __________
8. Voice modulation __________
9. Simple sentences __________
10. Transitions between activities __________
11. Facial expressions and body language
12. Teaching devices and strategies
REFERENCES


RECOMMENDED READING


Buker, G. N. (1966). A study of the ability of the educable mentally retarded to learn basic rhythmic reading through the use of a specific structured classroom procedure. *Dissertation Abstracts, 27*, 2168A. (University Microfilms No. 66-12953)


Educators Journal, 63(1), 94-97.


REFERENCES

Books


Articles in Journals or Magazines


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Theses and Other Papers


Buker, G. N. (1966). A study of the ability of the educable mentally retarded to learn basic rhythmic reading through the use of a specific structured classroom procedure. Dissertation Abstracts, 27, 2168A. (University Microfilms No. 66-12,953)


Grant, R. E. (1977). A developmental music therapy curriculum for the mildly mentally retarded, ages six through twelve. *Dissertation Abstracts International* 38, 4009A. (University Microfilms No. 77-29, 760)


