AN INVESTIGATION OF THE RELATIONSHIPS BETWEEN
PARENTAL INVOLVEMENT AND THE PERFORMANCE
ABILITY OF VIOLIN STUDENTS

DISSEMINATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
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By

Gerald Richard Doan, B.M., M.A.

* * * * *

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Reading Committee:
Dr. A. Peter Costanza
Dr. Henry L. Cady
Dr. David L. Meeke
Dr. Alan K. Brown

Approved By

[Signature]
Advisor
School of Music
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VITA

January 25, 1943   Born - Elyria, Ohio

1965 ..........  B.M., Ohio Wesleyan University, Delaware, Ohio


1967-1971 . . . Teacher of Instrumental Music, Marion Public Schools, Marion, Ohio

1970 ..........  M.A., Music Education, The Ohio State University, Columbus, Ohio

1971-1973 . . . Graduate Teaching Associate, String Pedagogy, The Ohio State University, Columbus, Ohio

PUBLICATIONS


FIELDS OF STUDY

Major Field: Music Education

Professors A. Peter Costanza, Henry Cady, David Meeker, Charles Benner, and Irwin Schneider

Minor Field: Music

Professor William Poland

Minor Field: String Pedagogy

Professor Robert Culver
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CHAPTER I

THE PROBLEM

Introduction

In attempting to increase student success in school endeavors, teachers have often turned to parental involvement in the musical activities of children. Parents have approached teachers with the desire to help their student with school activities. What kind of involvement by parents is desirable, and whether or not this involvement relates to student success is an area which has not been researched by instrumental music educators.

Research in the area of verbal skills and reading ability indicates that some consistency of results can be demonstrated in reported relationships between academic achievement and parental encouragement, approval, and sharing of activities.

The study of parental involvement in the activities of instrumental students is not in the literature, yet at least one contemporary pedagogue has advocated parental involvement in his methodology.

The Talent Education philosophy of Shinichi Suzuki seeks to instruct young children in performance of the violin
with a great deal of parental involvement. He believes that "teacher and parent (human environment) must be at a high level and continue to grow to provide a better learning situation for the child."\(^1\) At Suzuki institutes, a parent attends each lesson and actually learns with the student, "taking notes, learning to tune the violin, and developing an understanding of the correct posture and hand position."\(^2\) Parents also assist as guides in regular daily practice, using manuals to teach correct fingering and bowing in cooperation with the teacher. The introduction of the Suzuki philosophy in the United States has been accompanied by some questioning of its applicability to our culture.

If relationships exist between parental involvement and the instrumental performance abilities of students, then identification of related factors could conceivably provide approaches by teachers and parents to improve student performance abilities. There is a need for identification of musical abilities that can or cannot be fostered or improved through the use of parental involvement. This information could provide guidelines for teachers in enlisting parental support, and for parents in identifying behaviors which do assist with the development of student abilities. This study


\(^2\) Ibid., p. 11.
sought to provide data which describes the parental involvement of various student ability levels, and compares this involvement with students' performance ability.

**Purposes**

The purposes of this study were:

1. To determine whether or not significant relationships exist between parental involvement in music and the performance ability of seventh and eighth grade violinists.
2. To determine whether or not significant differences exist between the performance ability of students prepared in the following treatment groups:
   a. Group A prepared a performance task with teacher assistance only. (Music was not taken home.)
   b. Group B prepared a performance task with teacher assistance plus parent assistance with home practice.
   c. Group C prepared a performance task with assistance from a parent during home practice. A teacher did not assist.
   d. Group D prepared a performance task without assistance from a teacher or parents.
3. To determine the influence of parental involvement variables on the performance ability of seventh and eighth grade violinists. These variables were selected items from a parental involvement questionnaire.
Sub-Purposes

The sub-purposes of this study were:
1. To design a questionnaire which would provide a measure of parental involvement in the musical activities of their children.
2. To inventory students' performance ability on the violin by a valid, reliable, easily scored, and easily administered performance task.

Hypothesis #1

The ranking of Inventory of Performance Ability scores is significantly related to teacher rankings. (Each orchestra director ranked students according to performance ability.)

Hypothesis #2

Parental involvement is significantly related to the performance ability of seventh and eighth grade violinists.

Null Hypothesis #1

There is no significant difference between the parental involvement (as measured by the Parental Involvement Questionnaire) of parents of students in:

a. group A  
   b. group B  
   c. group C  
   d. group D
Null Hypothesis #2

There is no significant difference between the performance ability (as measured by the Inventory of Performance Ability) of students in:

a. group A
b. group B
c. group C
d. group D

Definitions

Parental Involvement: activity in music of the parents and other family members of the subject violinists as measured by the Parental Involvement Questionnaire.

Performance Ability: degree to which a student can perform accurately the following elements: intonation, rhythmic accuracy, articulation, and tempo as measured by the Inventory of Performance Ability.

Intonation: the pitch of tones in relationship to tonality, ("intoneness" and "pitch accuracy" are synonyms)...or/the ability to put the right finger on the right string in the right place on the fingerboard.

Rhythmic Accuracy: playing a note for the correct duration in an established tempo.

Articulation: making obvious differences between the following situations:
legato détaché: one bow per note, on the string, smooth bow change.

legato slur: multiple notes per bow, smooth bow.

staccato: one bow per note, short, stopped, on the string.

hooked bow: multiple notes per bow, on the string, stop between notes.

Tempo: maintaining a tempo.

**Delimitations**

1. The criteria for evaluation of performance ability were intonation, rhythmic accuracy, articulation (bowing), and tempo. Other factors such as posture, musicianship, and tone quality were not evaluated.

2. The study was limited to seventh and eighth grade violinists.

3. There are variables not accounted for which make it impossible to ascertain the reasons for or cause of different levels of ability.

4. Time was a limiting factor since the Inventory of Performance Ability allowed only three hours for preparation.
Assumptions

In the design of the study, the existence of these factors was assumed:

1. Parental Involvement could be assessed by a questionnaire.
2. Practice time was controllable through student practice records with parental verification.
3. Intonation, rhythmic accuracy, articulation, and tempo could be measured by the Inventory of Performance Ability. It was further assumed that these elements are critical measures relevant to violin performance ability.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This chapter presents and discusses literature related to parental involvement in music as it relates to students' musical abilities, preferences, and aptitudes. It also includes a discussion of other areas of academic achievement which have been approached through interest in parental involvement.

Music education literature frequently refers to the desirability of parental involvement in student endeavor. Of major interest to this investigator has been the highly publicized success of Shinichi Suzuki's Talent Education program in Japan which professes a constant mother-involvement. Suzuki stresses the position of the mother-teacher who attends all lessons, assists all practicing, and interprets manuals for her student violinist. Constant supervision coupled with support, understanding, and interest from parents as well as teachers has been credited for the widely publicized performance abilities of tiny Japanese violinists.

What Suzuki professes and practices has long been
advocated in American music education, although it has seldom been put into formal practice.

Although research in the area is very limited, early studies often suggested the need for further research. As early as 1938, Drexler\(^1\) suggested in the conclusion of her investigation of pre-school children's ability to sing a melody, that the influence of home music background be further explored. More recently the MENC Research Council has recommended an intensive study of all areas of the child's musical growth--both genetic and environmental.\(^2\)

Many writers have given specific suggestions for action. Howard Taubman, music critic for the *New York Times* newspaper, wrote a small book, *How to Bring Up Your Child to Enjoy Music*, in which he suggests using the phonograph as a force in establishing musical interest and desire for achievement. He criticizes public school music as "unreliable and variable; dull old routines that make music tiresome and forbidding."\(^3\) He says that like it or not, we must face the fact that musical development must of necessity take place in the home. This he feels is particularly

\(^1\)Edith N. Drexler, "A Study of the Development of the Ability to Carry a Melody at the Pre-School Level," *Child Development* 9 (1938), pp. 319-332.


true in the case of small children who can learn so much before they go to school. He suggests a varied exposure to fine recorded music as an environmental routine to assist a child's hospitality toward music.

Sheehy\textsuperscript{4} approaches the use of environmental stimulation to foster musical expression and appreciation with suggestions that parents utilize sounds inherent in daily living. Musical conversations, experimenting with instrumental sounds, listening to phonograph records, and rhythmic physical movements are a few of these.

Kirkpatrick suggests that "a child in a home where musical expression is habitual with the older members is more likely to give evidence of musical talent than if the child were brought up in a different way."\textsuperscript{5}

Beatrice Landeck comments that "when music enters naturally into the life of a child--at home or at school--he will of necessity enter the life of music."\textsuperscript{6}

These comments and suggestions represent only a sample of professional opinions, but regardless of their philosophical or psychological position, authorities interested in


the musical development of children have uniformly stressed the need for a stimulating musical environment in early childhood. The belief is almost unanimous that a variety of musical experiences and contacts serve to amplify the responses and appreciations of the young.

Musical Abilities and Parental Involvement

Research reviewed for this study used a variety of terms, like "home musical environment," or "family activity in music," to refer to what this investigator has called "parental involvement." Each was concerned with describing the musical activities of family members regardless of what this activity was called.

A review of research concerning the relationship between parental involvement in music and student musical abilities or aptitudes produced a small number of studies which showed low positive or negative correlations between home musical environment and the ability to sing. One study, by Vermuth, 7 showed significant correlations between family and student activity in music and music aptitude. This

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7 Robert F. Vermuth, "Relationship of Musical Aptitude to Family and Student Activity in Music, Student Interest in Music, Socioeconomic Status, and Intelligence Among Caucasian and Negro Middle School Students" (unpublished Ph.D. dissertation, Ohio State University, 1971).
investigator could find no evidence of research relating parental involvement in music and the abilities of instrumental students.

One of the earliest studies to include home musical environment as a point of interest was by Vance and Grandprey. They used interviews with the parents of thirty-one children to rate home musical environment. The interview form was used to judge the home for musical impression and expression, and musical training and experience of all family members. Highest correlation was between home musical environment (parental involvement) scores and musical responsiveness—.62.

In 1938 Drexler attempted to observe relationships between a child's singing ability, his home environment, and his parents' singing ability. Drexler's questionnaire gathered information concerning time spent in singing and listening activities in the home. Parents also rated their own singing ability. The correlation between the child's singing ability and his home environment was .32. This low result was attributed to the homogeneity of the population (all upper-socioeconomic), and the smallness of her sample.

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9 Edith N. Drexler, op. cit.
(only twenty-three children). A significant correlation was observed between the child's singing ability and the mother's singing ability. A similar correlation with the father's ability was only .37. Drexler thus inferred that the mother-child relationship was the strongest environmental influence.

An early study by Friend investigated "Influences of Heredity and Musical Environment on the Scores of Kindergarten Children on the Seashore Measures of Musical Ability." While her interest was mainly in comparing abilities of parents and students on the Seashore batteries, she did use a short involvement questionnaire for correlation with student ability. The Seashore ability correlations were positive but not high (pitch = .144, intensity = .456, consonance = .111). The correlations between environment and student Seashore scores however were all negative.

Dorothy Shull's 1953 study compared involvement questionnaire scores with classroom teacher rankings of the "musicality" of seventy-one kindergarten children. Slight positive correlations were observed between parental involvement in music and "musicality." "Musicality" was defined as dependent on singing ability, amount of singing activity, the

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length of time needed to learn a song, kinds of responses demonstrated on rhythm instruments while singing, and movements displayed during rhythmic activities. These qualities were evaluated by a classroom teacher. Miss Shull did not indicate that she came in contact with the population but relied on classroom teacher reports. This would seem to make her findings suspect.

Shelton improved on Shull's study by using music teachers to evaluate children. He thus selected eighteen musical and twelve unmusical children in order to investigate "The Influence of Home Musical Environment Upon Musical Response of First-Grade Children." He used a questionnaire to rate home environment (parental involvement) as musical, average, or unmusical. Using a chi square test he observed a significant (.01 level) relationship between home environment and musical response. Particular contributors were the child's opportunity to hear music, his opportunity to sing, his opportunity to experience recorded music, and the singing ability of the child's parents. Insignificant variables included rhythmic movement, the presence of a piano in the home, attendance at Sunday school, previous parental study of music, and parental concert attendance.

In a study concerning "Relationships Between the Singing Ability of Prekindergarten Children and Their Home Musical Environment," Kirkpatrick classified 164 prekindergarten children as being from excellent, good, or poor home musical environments. This was achieved through questionnaires and interviews with parents. Singing ability was rated objectively through assessment of the number of tones sung correctly in a song chosen from recordings made over a one month span and tested with a Stroboconn. Strong relationships were observed between singing ability and home musical environments (.005 significance). Kirkpatrick concluded that "the probability is very great that non-singers will come from poor musical environments; whereas excellent musical environments will generally produce singers or partial singers with little likelihood of non-singers." He further concluded that significant factors in the home environment included singing to and with the child, offering help, encouragement, and criticism, making up songs, family singing, playing musical instruments in the home, and previous musical study by the parents. Of lesser importance were the assistance of other children, playing musical games, and singing at Sunday school. "Television and the phonograph are apparently too widespread in the culture

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13 Kirkpatrick, op. cit.
14 Ibid., p. 147.
to exert discernible differences in children's singing ability.\textsuperscript{15}

The most recent and most comprehensive study of home involvement is Robert Wermuth's study\textsuperscript{16} which compared scores on Gastons \textit{Test of Musicality} from 501 subjects to independent variables, namely, family and student activity in music, family and student interest in music, socioeconomic status, and intelligence. Family and student activity was collected from self administered questionnaires. Socioeconomic status data was based on the 1960 set of status scores of Nam and Powers, and I.Q. scores were from the \textit{California Short Form Test of Mental Maturity}.

Highly significant relationships at and beyond the .01 level of probability were found between musical aptitude and family activity in music, student activity in music, student interest in music, and IQ among Caucasian subjects in all three grades. Among sixth and seventh grade Caucasian subjects, a significant relationship was found beyond the .05 level between musical aptitude and socioeconomic status.

A positive relationship was found between musical aptitude and family activity in music, student activity in music, student interest in music, and IQ among Negro subjects in all three grades. There was a greater variance between the correlations among Negro students than was found among Caucasian students.\textsuperscript{17}

Of particular interest to the present study is Wermuth's

\textsuperscript{15}Ibid., p. 148.
\textsuperscript{16}Robert F. Wermuth, \textit{op. cit.}
\textsuperscript{17}Ibid., p. 142.
conclusion that "the environmental factors of family and student activity in music are significantly related to musical aptitude."\textsuperscript{18}

Kelly studied musical preferences of adolescents in order to determine the effects of training on such preferences.\textsuperscript{19} "Training" referred to formal music study as well as social influences from home. A questionnaire was administered to 210 high school and junior high music students at the Florida State University Summer Music Camp. The students were predominantly female and mostly of older high school age. Data indicated that the amount of musical training increased with grade level. All families owned radios, televisions, and record players while more than half of them indicated a preference for listening to live performances. More than half of the subjects had parents with musical backgrounds. Most students indicated a preference for playing in an orchestra and for listening to classical music.

The conclusion, that "increase in preference of classical music and the decrease in that of popular music from the lower to the higher grades would lend support to the

\textsuperscript{18}Ibid., p. 153.

concept that preference is related to training,\textsuperscript{20} was based
on the percentage of occurrence rather than on statistical
procedures. While Kelly's study was not directly related
to parental involvement, it indicated that even the musical
tastes or preferences of a student might be influenced by
musical activities in the home.

\textbf{Child Development and Parental Involvement}

Investigations into non-musical areas of a child's
development are more numerous and at the same time more
diverse in approach and in results. The area of parental
involvement in music is bordered by studies of parent and
student attitudes. This realm of psychological research is
more voluminous and less specifically oriented than the
present study of parental involvement. In order to contain
the scope of this study it was necessary to limit the
choice of literature to those studies which dealt with
parent activities in music. That is, while the word atti-
tude appears, and psychological attitudes may be implied
or stated, an attempt was made to center concerns around
studies which described parental activities, and the rela-
tionships of these activities to some developing ability in
a school student.

\textsuperscript{20}\textit{Ibid.}, p. 121.
The general area of child development has been approached through a vast number of variables. Of particular interest to this study were the variables of intellectual skills and general achievement. Some other areas such as social class, social environment, and social deprivation were not a concern of the present study and hence are not reviewed.

Extensive reviews of literature concerning evidence for the potency of early environment in shaping cognitive abilities have been conducted by Bloom(21) and others (Anastasi,(22) Bayley,(23) Klineberg,(24) and Yarrow(25)). Hunt(26) conceives of learning and intelligence as dependent on


infantile experience. Beach and Jaynes, 27 as well as Hunt, have reviewed the work dealing with the effects of environmental stimulation on later learning. Experiments with animals, (recently by Krech, Rosenzweig, and Bennett 28), record not only behavioral changes, but also chemical and neuro-anatomical changes in the cortex of animals raised in "enriched" and "impoverished" environments (in favor of those raised with more complex environmental stimulation).

All this material leads to a basic assumption "that the formation of cognitive and intellectual skills can reasonably be conceived of as developmental in nature and modifiable by variation in the environment." 29 Granted this assumption, we turn to research of child rearing and educational practices and their relationships to student success. Bloom feels that we are at a level where one can "specify some of the major characteristics of an environment which will positively or negatively affect the development of


general intelligence of school achievement."\textsuperscript{30}

Of specific import to this investigation are those studies of direct measures of parental influence.

**Intellectual Performance**

Bing studied the "Effect of Child Rearing Practices on Development of Differential Cognitive Abilities"\textsuperscript{31} with sixty mothers of fifth grade children. The children (of similar I.Q.) were separated into "high" and "low" verbal groups. The grouping was based upon the contrast of verbal scores with spatial and numerical scores. Questionnaires, interviews, and "interaction situations" were used to collect data. Responses on the questionnaires and the interviews indicated that mothers of "high verbal" children provided more verbal stimulation in early childhood (highly significant for boys, but not for girls). These mothers also remembered more of the child's early accomplishments (significant for boys, but not for girls), were more critical of poor academic achievement, provided more storybooks, and included the child in mealtime conversations. High verbal scores among girls were positively related to time

\textsuperscript{30} Bloom, op. cit., p. 196.

spent (by the father) reading to the child. Sex differences in the findings were not explained. In the observed "interaction situations" mothers of high verbal children provided more voluntary assistance and also more pressure for improvement. Thus the mother's part in communication and interaction with the child related to the child's cognitive skill level.

Verbal skill acquisition has also been shown to be related to I.Q. scores. Moss and Kagen\textsuperscript{32} used the Fels Longitudinal Study to develop a "maternal acceleration" score derived from ratings of "pressure" for the child's achievement, as evidenced by middle-class mothers in interviews. A significant relationship between the child's I.Q. and "maternal acceleration" was found only for boys at the three-year level but not for either sex in the six-year age group. When repeated with a second sample of children, positive correlations were observed between mother's I.Q. score and educational level and the child's (three and six year olds) I.Q. scores. The "maternal acceleration" score was, again, related only to the boys' I.Q. at the three-year level. The authors note that one possible explanation lies in the fact that four of six items on the two-and-a-half-year scale of the Stanford-Binet test are of a type

that mothers who had high "maternal acceleration" scores emphasized (i.e., identifying objects by use, naming objects and body parts, and picture vocabulary).

These studies would indicate that childhood achievement and parental practices, are age and sex-dependent in their predictive ability for later adult achievement behavior. Evidence presented by Moss and Kagen\(^3\) also indicated that there may be age-dependence. "There are critical periods in a child's development when a particular parental practice may be more effective in shaping later development than if it is introduced at other than the optimum age or developmental level."\(^4\)

Milner\(^5\) used children's responses to questions about home environment to uncover parental influences. First-grade children were classed as "high" and "low" scorers on the Haggerty Reading Examination and the Language Factors subtest of the California Test of Mental Maturity. "High scorers" showed significantly more responses for such parental behavior-related items as: expressed appreciation for the time mother spent taking them places and reading to them; possession of a great many storybooks and the fact


\(^4\)Ibid.

that the parents regularly read to them.

Of particular note was a study by Wolf\textsuperscript{36} who related parental influence to the intelligence test performance of sixty fifth-grade students. Through personal interviews with mothers, influences relevant to development of intelligence were chosen for a sixty-three item questionnaire. These items were then used as a basis for ratings on thirteen scales designated as "Environmental Process Characteristics." The total score and the child's I.Q. score showed a highly significant relationship (.69). Of the thirteen characteristics, significant relationships were observed with the parents' intellectual expectations for the child, the amount of information that the mother had about the child's intellectual development, the opportunities provided for enlarging the child's vocabulary, the extent to which the parents created situations for learning in the home, and the extent of assistance given in learning situations related to school and nonschool activities. Dave\textsuperscript{37} used the same interview schedule in a study done nearly concurrently with Wolf's but grouped variables into an "Index of Educational Environment." The correlation of this "Index" with achievement scores on a


test of word knowledge, spelling, reading, and computation was .80.

Achievement

Several studies have attempted to relate specific child-rearing practices or attitudes to the development of either achievement behavior or achievement motives in the child. The use of achievement as a variable is described by Crandall as differing from other behavior variables on the basis of "positive reinforcement for demonstrated competence." He likewise describes achievement situations as having "cues pertaining to some 'standard of excellence'," thus distinguishing them from other social situations.

Crandall, Preston, and Rabson obtained ratings for achievement behavior in a nursery school free-play situation, child-mother interaction in the home, and mother reactions to child behavior. Their results describe a "high-achieving" child as one who is not always dependent upon his mother for emotional support and whose mother frequently rewards achievement efforts.


\[39^{39}\] Ibid.

Similarly Crandall, Dewey, Katkovsky, and Preston;\textsuperscript{41} Katkovsky, Preston, and Crandall;\textsuperscript{42} and Katkovsky, Preston, and Crandall\textsuperscript{43} investigated the relationship of parents' attitudes concerning their own achievement to the achievement behaviors of their child. Findings indicated a relationship between parents' self-achievement values and the expectations held for their children. Significant relationships were found between the academic achievement of girls and the amount of "affection" shown to daughters by their mothers. Fathers of academically proficient daughters praised more and criticized less. Studies by Callard,\textsuperscript{44} and Rosen and D'Andrade\textsuperscript{45} supported these findings.


\textsuperscript{42}W. Katkovsky, Anne Preston, and V. J. Crandall, "Parents' Attitudes Toward Their Personal Achievements and Toward the Achievement Behaviors of Their Children," \textit{Journal of Genetic Psychology}, \textbf{104} (1964), pp. 57-82.

\textsuperscript{43}W. Katkovsky, Anne Preston, and V. J. Crandall, "Parents' Achievement Attitudes and Their Behavior with Their Children in Achievement Situation," \textit{Journal of Genetic Psychology}, \textbf{104} (1964), pp. 105-121.


The only study of achievement as a variable which showed negative results was by Biglin,46 who measured parental attitude by the Nebraska Parent Attitude Scale. Non-significant relationships were observed between parents' attitudes and the academic achievement of their child. This difference in findings was probably a result of the difference in attitude measurement techniques and in difference in questionnaire or interview format.

Summary

Research into the area of parental involvement in a student's musical ability centers on vocal skills of young children or on the general effects to musical aptitude. These studies have used questionnaires or interviews to measure musical home environment. Negative or low positive correlations between home environment and singing ability seemed most prevalent. At least one study indicated that home musical activity can influence a child's musical preferences. Another study related family musical activity to a student's musical aptitude.

General results of studies concerning intellectual skills seem to agree that children of superior intellectual

ability come from homes where parental interest in their intellectual development is evidenced by pressures to succeed and assistance in doing so, particularly in the development of the child's verbal skills.

Those studies dealing with achievement seem to agree that high achieving children come from homes where parents have themselves been high achievers and where praise is frequent. As for intellectual skills, the measurement of achievement appears to be the result of overt parental pressures for achievement along with expressed attitudes indicating a high level of aspiration for the child.
CHAPTER III

PROCEDURES

Introduction - Design of the Study

For the purposes of this study subjects were selected and assigned to treatment groups, a performance task was designed and administered in four different preparation treatments, and a questionnaire was designed to measure parental involvement in students' musical activities. Performance ability was evaluated after the preparation period and scores were statistically compared to parental involvement scores in order to test for relationships. Variables of parental involvement were selected from questionnaire items and analyzed for their contribution to performance ability.

This chapter contains information concerning the subjects and treatments. Procedures used in the selection of musical examples and questionnaire materials are described. The methods used in collecting and statistically analyzing data are also discussed.
The Subjects

The subjects were violinists from four schools near Columbus, Ohio and their parents. The schools were chosen only for the existence of a junior high (or middle school) orchestral program. In schools A, B, and C, all seventh and eighth grade violinists were used. In school D the orchestra was so much larger than the others that an unbalance of group size would have resulted if all seventh and eighth grade violinists had been used. From the total list supplied by that teacher, twenty students were randomly selected using a table of random numbers. The four groups were thus very similar in number of subjects. Each school population was randomly assigned to one of the following treatment groups:

- **group A**: Task was prepared with teacher assistance only. (Music was not taken home.)
- **group B**: Task was prepared with teacher assistance plus parent assistance during home practice.
- **group C**: Task was prepared with parent assistance during home practice. A teacher did not assist.
- **group D**: Task was prepared with student practice only. No assistance was given.

The preparation time for all groups equaled three hours. The teacher in treatments A and B was this investigator. All
students worked with written definitions\textsuperscript{1} and parents worked from similar written suggestions.\textsuperscript{2}

From the original seventy-six subjects, ten were eliminated from the study because of absence and two were eliminated because questionnaires were not returned. The populations are tabulated below.

\begin{center}
\textbf{TABLE 1}
\end{center}

\begin{center}
\begin{tabular}{ l c c }

& \textbf{Original} & \textbf{Final} \\
\hline
Group A & 21 & 17 \\
\hline
Group B & 17 & 15 \\
\hline
Group C & 18 & 16 \\
\hline
Group D & 20 & 16 \\
\hline
\end{tabular}
\end{center}

\textbf{Treatments}

This study took place during the first three weeks in

\textsuperscript{1} see Appendix I, p. 100.

\textsuperscript{2} see Appendix D, p. 92.
May, 1973. The four treatments were administered at the same time during the first week of May, and the recording sessions took place during the third week. This assured an equal span of time over which the three hour preparation period was spread.

At the time of the first visit to each school, the study was explained and materials were distributed. All students were given written and oral definitions of the techniques to be evaluated. All students heard each musical example from the performance task played once by this investigator. Students in groups B and C (those involving parent help) were supplied with "practice helps for parents." Students in groups B, C, and D (those requiring home practice) were given calendars of May with space allotted to enter practice records. They were instructed to enter minutes practiced each day with the total for the treatment period added and verified by a parent's signature. A report of these records can be found in Appendix J on page 101. A letter to parents explaining the study and the student's responsibility was included in each packet with the musical examples.

In groups A and B where this investigator assisted, the

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3 see Appendix I, p. 100.
4 see Appendix D, p. 92.
5 see Appendix E, p. 93.
6 see Appendices A, B, and C, pp. 89, 90, and 91.
approach was that of a class lesson with each student having a copy of the music. Elements to be studied and evaluated were isolated and drilled to help insure understanding. Intonation was approached by discussion and performance of scale patterns present in each example. Finger patterns were drilled and marks made in the music to indicate half step progressions. Scale work was then combined with important rhythmic patterns from the example. Articulations were defined and demonstrated by the investigator and difficulties in each example were isolated and drilled repeatedly. When these elements had been covered, each example was played in unison at various tempi to assist students in the selection of a tempo which suited their ability. (NOTE: the majority of students attempted to play at, or near, the metronomic tempo indicated on the music.)

The only difference between group A and group B was in time spent in drill. Group A worked with this investigator for six half hour classes while group B worked for three half hour classes. The same demonstrations, definitions, and techniques were used, but group A was drilled longer on each element. Students in group B were asked to do this drill at home with the help of a parent. The following written suggestions for parent assistance were sent home.
"Helping" a student practice may include the following activities:
scheduling practice time
listening to practice
criticizing
praising
checking assignment to help student understand definitions

Read the definitions with your child. Compare what he does with what the definition says he should do. If you are able, then:
check rhythm
count time
correct intonation

Group C prepared for three hours at home with the assistance of a parent or parents. The same written suggestions (see above) for parent assistance were sent home. Each student kept a practice record to control the allotted time. These were verified by a parent and returned to the investigator.

Group D prepared for three hours at home with no assistance. Practice records were again kept by the students, verified by parents and returned to the investigator.

All contact with students was conducted in a room (provided by each orchestra teacher) near the orchestra room so that the rest of the orchestra could continue their usual activities.
Inventory of Performance Ability

Selection of Musical Examples

Nine musical examples were selected from student violin literature. Elements to be evaluated were intonation, rhythm, articulation, and tempo (see definitions, chapter I). These examples contained a variety of passages which require the performer to discriminate among possible finger patterns, rhythmic patterns, and bowing styles (articulation). The nine examples represented a range of difficulty and techniques which this investigator judged to be appropriate to the abilities of "average" seventh and eighth grade school violinists. Although metronomic tempi were indicated, it was felt that each could be performed at a variety of tempi without suffering musical qualities.

This selection of examples was submitted to nine professional string players who were members of the Columbus Symphony Orchestra and/or faculty members of a school of music at Ohio State University, Ohio Wesleyan University, or Capital University. All had performed as violinists and/or violists and all had experiences in teaching young students.

Each of these experts was given definitions of string techniques to be evaluated, and was asked a series of four questions about each musical example.
1. Are the elements listed below each example obviously present in the example?
2. Is the example playable by the "average" seventh or eighth grade school violinist? (average = having had four or five years of school instruction.)
3. Is one element more obvious than all others?
4. If listening to a performance of the example (on tape), could you judge the effectiveness of the performance in reference to the elements present?

In addition, each expert was asked to select one example, or a combination of several, which he felt contained all the elements.

The nine musical examples are described below; and the results of the experts' judgements were tallied and are reported in Table 2.
Example A

Title: March-Cantante (15 bars)
Composer: Charles Dancla

Description of elements:

intonation: key - D major, accidentals to effect placement of second finger and third finger
use of notes: half, quarter, eighth, dotted eighth followed by sixteenth, and triplets
articulation: legato detaché, legato slur
suggested tempo: quarter note = 88
Experts' comments: Variation in articulation is not present.
Example B

\[ J = 76 \]

Title: 6\textsuperscript{me} Air Vari\é on a theme by Mercandante (theme only)
Composer: Charles Dancla
Description of elements:

intonation: key - D major, accidentals to effect placement of second finger

use of notes: dotted half, half double dotted quarter, eighth, dotted eighth with sixteenth, and triplets

articulation: legato detach\é, legato slur

suggested tempo: quarter note = 76

Experts' comments: Double dotted quarter with sixteenth is too difficult. Variation in articulation is not present.
Example C

Title: Gavotte
Composer: P. Martini
Description of elements:

intonation: key - G major modulating to g minor, accidentals to effect placement of first and second fingers

use of notes: half, quarter, and eighth
articulation: all four types used

Tempo: quarter note = 132

Experts' comments: Key change provides adequate problems in intonation. Articulation problems are very evident.
Example D

\[ J = 100 \]

Title: Fantaisie Élégante - Andante Cantabile
Composer: Charles Dancla

Description of elements:

intonation: key - D major, accidentals to effect placement of second and third finger
use of notes: whole, dotted half, half, dotted quarter, eighth, dotted eighth with sixteenth; also ties, quarter and half rest
articulation: legato slur
tempo: quarter note = 100

Experts' comments: Rhythmic variety is present but articulation is not varied enough.
Example E

$\frac{3}{4}$

Title: Gavotte No. 2
Composer: J. S. Bach
Description of elements:
intonation: key - D major, accidentals to effect placement of first and second fingers
use of notes: half, quarter, and eighth
articulation: all four types needed; rapid alternation of types required
tempo: quarter note = 138

Experts' comments: Contains greatest collection of all elements.

Example F

Title: Minuetto (8 bars)
Composer: J. S. Bach

Description of elements:

intonation: key - G major
use of notes: dotted half, quarter, eighth
articulation: legato detached, legato slur, hooked bow
tempo: quarter note = 188

Experts' comments: Too easy.
Example G

\[ \text{\( \text{l} = 126 \)} \]

Title: Gavotte No. 1
Composer: J. S. Bach
Description of elements:

intonation: key - g minor, accidentals to effect placement of first and second finger
use of notes: half, dotted quarter, quarter, and eighth
articulation: legato detache, legato slur, staccato
tempo: quarter note = 126

Experts' comments: Particularly good for intonation.
Example H

Title: Gavotte
Composer: Jean Becker

Description of elements:

intonation: key - g minor modulating to G major, accidentals to effect placement of first and third fingers

use of notes: half, quarter, sixteenth, dotted eighth with sixteenth; also eighth rests

articulation: all four types needed; rapid alternation of types necessary

tempo: quarter note = 132

Experts' comments: Difficult, but all elements are present.
Example I

$J = 72$

Title: none
Composer: S. Suzuki
Description of elements:

intonation: keys - D major, G major, A major, E major;
same finger sequence and pattern on each string
use of notes: dotted half and quarter
articulation: legato slur
tempo: quarter note = 72

Experts' comments: Very easy but provides for use of all four strings. Slow tempo is useful.
### TABLE 2

**TALLY OF EXPERTS' OPINION ON SELECTION OF USABLE MUSICAL EXAMPLES. (QUESTION 5)**

<table>
<thead>
<tr>
<th>Expert</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>3.</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

| Total  | 3 | 2 | 5 | 2 | 6 | 1 | 4 | 4 | 4 |

**Examples used in Preparation**
- x x x x x x

**Examples used in Final Taping**
- x x
Based on the experts' opinions, five examples (C, E, G, H, and I) were selected for preparation by the students.

After task preparation, examples C and E were selected to be taped for evaluation. These were the examples most often selected by the experts as containing the necessary elements.

It should be noted that tone quality was originally among those elements to be evaluated. Comments by the experts and an appraisal of the testing apparatus caused this element to be eliminated since no usable standard existed for evaluation; and the use of four different recording situations would cause differences by mere acoustics of the room used.

Recording of Inventory of Performance Ability

Students were assigned an identification number and taped individually by the investigator on a Sony #TC-124cs stereo cassette recorder using BSAF stereo chromium dioxide cassettes. The microphone, a Sony P995, was placed approximately four feet from the student's violin. The student was instructed to play the examples with a short pause between the two. Each violin was tuned by the investigator just prior to each taping. Nervousness did not seem to be a detrimental factor since no one was present except the investigator; and each orchestra teacher indicated that tape recorders were occasionally used in class for group and
individual evaluation.

**Evaluation of Task Performances**

**The Judges**

Three judges were selected to rate the student performances. Each was a professional string player and had experience as a public school string teacher.

Judge I was a violinist in a professional symphony and an experienced public school string teacher. At the time of the study he was involved as a string teacher of elementary and secondary students as well as a private teacher.

Judge II had wide experience as a public school string teacher, a string clinician, a performer in several major symphonies, a private teacher, and a professor of string pedagogy.

Judge III was a former public school string teacher who at the time of the study served as concertmaster of an amateur symphony, a private teacher, and an experienced stringed instrument repairman.

**Judging Procedure**

Judging of student performances took place in a "studio" atmosphere. Tapes were played back through Sansui SF-3000 speakers with an impedance of 8.2 and a maximum power of
80 w. The judges were seated in a semi-circle around the play-back equipment so that each was approximately ten feet from the apparatus. They were asked not to comment during the judging session. Students were identified only by number so that judges could not know which student or which treatment group was being heard. Short breaks were provided each hour to reduce fatigue. Total judging time was three hours.

Each judge had a copy of the music to be performed, a numbered score sheet with space for intonation, rhythm, articulation, and tempo scores, and a set of definitions of these elements. The judges were asked to listen to each whole performance, then score each element 0 to 10 (10 being highest).

During a short training session before the evaluations began, it was determined that, due to the short duration of each performance, the simplicity of the examples, and the experience of the judges, it was possible to make the evaluations in one hearing.

The Measurement of Family Involvement in Music

Family involvement in music was determined by a self-administered questionnaire designed for the study.7 Questionnaires were sent to all parents at the conclusion of the experiment with a letter of explanation.8 The general format

7 see Appendix H, p. 96.
8 see Appendix G, p. 95.
was based on Wermuth's "Family Activity in Music" questionnaire. The items selected from four individual case studies of students who were known to come from families with what this investigator judged to be high degrees of family involvement. Each of the case study families submitted lists of family activity which have contributed to their student's musical interest, participation, knowledge, and perhaps success. From these subjective lists, items of common occurrence became questions for the Family and Student Involvement Questionnaire. The result was a selection of items which would inventory parent and student background in music; parent, student and sibling participation in music; musical apparatus in the home; attendance at performances; and activities directly related to the process of student preparation.

The questionnaire was submitted to music teachers and music education experts in order to eliminate or revise confusing items. The final form included items for biographical data (name, age, sex, school, grade) as well as the forty-five involvement items.

Before statistical analysis, the original number of variables (45) was reduced to twenty-four and answers were assigned numerical value in order to be programmed. The

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10 See Appendix K, p. 104.
reduction was made by combining questions or eliminating those which were determined unrelated to family involvement. For example, items for parental instrumental experience (questions 1 through 4) were reduced to two for each parent: did each play an instrument, and did each practice. Some questions were eliminated because of apparent confusion. Question 18, for example, was a misinterpreted question. It should have referred only to music camps. Some questions, like number 5, were purely informational or served to lead from one question to another. These were also unnecessary for statistical inclusion. A perusal of tallied results also eliminated those items which resulted in unanimous answers; these also were statistically not usable.

The final statistical data contained information on the following twenty-four variables:

1. Inventory of Performance Ability score.
2. Student's age.
3. Student's grade.
4. Student's sex.
5. Number of years of violin experience.
6. Number of years of private lessons on violin.
7. Number of practice hours per week.
8. The family owns a piano.
9. The family owns a metronome.
10. The family owns a record player.
11. The family owns a tape recorder.
12. The family owns books about music.
13. The family owns recordings by violinists.
14. The student plays other instruments.
15. A parent assists with the student's practice.
16. A parent listens to the student's practice.
17. Mother plays (or played) an instrument.
18. Father plays (or played) an instrument.
19. Mother practices now.
20. Father practices now.
21. Siblings play instruments.
22. Parents attend professional concerts.
23. Students attend professional concerts.
24. Parents attend school concerts.

The responses to these variables were also tabulated in the form of percentages by group and for all subjects in order to further describe the subjects and to add strength to the needs and findings of this study.

Due to the lack of scientific empirical evidence and because of disagreement among music education experts concerning the relative values and significance of different types of musical activities and experiences, items were given equal numerical weights. Items indicating a "yes" answer were given one point and one point was given for (a) each parent who participated in musical activities, (b) each instrument played by a family member, (c) each year studied by the student, and (d) each year of private lessons. Items
answerable by marking never, rarely, sometimes, or always were scored 0, 1, 2, or 3 points respectively.

Relative influence of items on performance ability scores was calculated by comparing variables to the students' performance ability inventory scores through use of regression analysis.

Statistical Procedures

Major statistical procedures used for the study included Pearson product moment correlations, Spearman Rho rank order correlations, analysis of variance, and step-wise regression analysis.

Correlation Coefficients

The Spearman Rho rank order correlation was used to compare performance ability scores with each teacher's ranking of his/her students, thus testing hypothesis #1, namely, that there is a relationship between teacher ranking and rank order of performance ability scores within each group. This data was analyzed by the instruction and research computer center at Ohio State University.

The Pearson product-moment correlation coefficient was used to test the hypothesis #2, namely, that there is a significant relationship between parental involvement and performance ability. A nonparametric statistical package
(PPAR) version 40.09 modified for IBM 360/75 at Ohio State University was used to test this hypothesis.

**Analysis of Variance**

Program BMD01V (analysis of variance for one-way design) was used to test null hypothesis #1, namely, that there is no significant difference between the involvement of parents of students in the four treatment groups; and null hypothesis #2, namely, that there is no significant difference between the performance ability of students in the four treatment groups.

**Regression Analysis**

Program BMD02R (stepwise regression) was used to deal with the question: which of the twenty-four selected variables from the involvement questionnaire were most influential in determining the performance ability of the subjects?
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

Findings of the study will be presented in this chapter as they relate to hypotheses, null hypotheses, and a description of the subject families. Sources of data will be discussed and statistical data presented.

The Validity of the Inventory of Performance Ability

The content validity of the Inventory of Performance Ability results was established by the scrutiny of experts as described in Chapter III (Table 2). A further statistical test was used to establish concurrent validity, described by Gronlund as "how well test performance compares with some other current performance."¹ He suggests that one "compare test scores with another measure of performance obtained at approximately the same time."² The "other measure" used for this study was a ranking of students by ability. Each teacher

² Ibid.
was asked to rank his students according to their ability to perform with accurate intonation, rhythm, articulation, and tempo maintenance. A Spearman Rho rank order correlation coefficient between Inventory of Performance Ability (IPA) scores and teacher ranking (TR) was used for each treatment group. Table 3 reports results of this procedure. Raw data is reported in Appendix L, page 108.

TABLE 3

SPEARMAN CORRELATION BETWEEN INVENTORY OF PERFORMANCE ABILITY (IPA) SCORES AND TEACHERS' RANKINGS (TR)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Correlation Coefficient IPA and TR</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>0.7936</td>
<td>.001</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>0.8490</td>
<td>.001</td>
</tr>
<tr>
<td>C</td>
<td>16</td>
<td>0.9551</td>
<td>.001</td>
</tr>
<tr>
<td>D</td>
<td>16</td>
<td>0.7588</td>
<td>.001</td>
</tr>
</tbody>
</table>

Since the correlations between IPA scores and teacher rankings were highly significant for each treatment group, it can be concluded that concurrent validity was present and that the Inventory of Performance Ability was a valid measure of the performance abilities of these populations. Hypothesis
number one was thus retained. There was a significant relationship between Inventory of Performance Ability scores and teacher rankings.

Hypothesis Number Two

Hypothesis number two stated that long-range parental involvement is significantly related to the performance ability of seventh and eighth grade violinists. This was tested using the Pearson product-moment correlation. Inventory of Performance Ability scores were compared to Parental Involvement scores for all subjects. The results of this procedure are given in Table 4.

TABLE 4

CORRELATION BETWEEN INVENTORY OF PERFORMANCE ABILITY (IPA) AND PARENTAL INVOLVEMENT (PI)

<table>
<thead>
<tr>
<th></th>
<th>IPA</th>
<th></th>
<th>PI</th>
<th></th>
<th>r</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Range</td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>2.3-39.6</td>
<td>23.3875</td>
<td>26-91</td>
<td>57.8281</td>
<td>.4133</td>
<td>.001</td>
</tr>
</tbody>
</table>

r - Pearson product-moment correlation
Thus hypothesis number two is retained since a statistically significant relationship was indeed observable between Performance Ability and Parental Involvement. The Pearson product-moment correlation coefficient of .4133 is significant beyond the .001 level.

Null Hypothesis Number One

In order to determine that the four groups represented subjects from similar families, a null hypothesis, namely, that there is no significant difference between the long-range parental involvement of parents of students in the four treatment groups, was tested using analysis of variance procedures. Program BMD01V was used in the computer at Ohio State University. Results of this procedure are reported in Table 5.
### TABLE 5

ANALYSIS OF VARIANCE FOR PARENTAL INVOLVEMENT SCORES

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>58.8235</td>
<td>10.2484</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>53.9333</td>
<td>14.2852</td>
</tr>
<tr>
<td>C</td>
<td>16</td>
<td>59.9375</td>
<td>18.3683</td>
</tr>
<tr>
<td>D</td>
<td>16</td>
<td>58.3125</td>
<td>10.7003</td>
</tr>
</tbody>
</table>

ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>between groups</td>
<td>319.3320</td>
<td>3</td>
<td>106.4440</td>
<td>0.5644</td>
</tr>
<tr>
<td>within groups</td>
<td>11315.7734</td>
<td>60</td>
<td>188.5962</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>11635.1055</td>
<td>63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order for a significant difference to exist, an F ratio of 2.76 is necessary (at .05 level with 3 and 60 degrees of freedom\(^3\)). Thus the difference shown is non-significant and the null hypothesis is retained. A significant difference between the Parental Involvement of the

\(^3\)Ibid., p. 347.
four treatment groups is not observable. This would indicate that the parental involvement of families in each group was similar and therefore the findings of treatment comparisons (null hypothesis number two) can be considered as resulting from the treatment procedures.

Null Hypothesis Number Two

In order to test differences in three hour treatments, a similar analysis of variance was run on the Inventory of Performance Ability scores of the four treatment groups. Results of this procedure are reported in Table 6.

TABLE 6

ANALYSIS OF VARIANCE FOR INVENTORY OF PERFORMANCE ABILITY

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>19.6706</td>
<td>12.7369</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>26.8333</td>
<td>6.3202</td>
</tr>
<tr>
<td>C</td>
<td>16</td>
<td>20.0687</td>
<td>14.2827</td>
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<td>16</td>
<td>27.4249</td>
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TABLE 6 - Continued

ANALYSIS OF VARIANCE

<table>
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<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F ratio</th>
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<tr>
<td>between groups</td>
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<td>3</td>
<td>283.3369</td>
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<tr>
<td>within groups</td>
<td>7708.2517</td>
<td>60</td>
<td>128.4710</td>
</tr>
<tr>
<td>total</td>
<td>8558.2695</td>
<td>63</td>
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</tbody>
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Null hypothesis number two stated that there is no significant difference between the performance ability of students in the four groups. An F ratio of 2.76 (with 3 and 60 degrees of freedom) is necessary for significance at the .05 level.\(^4\) Since the analysis of variance showed an F ratio of 2.2055, the null hypothesis is retained, although the F ratio is positive and approaches significance. In the opinion of this investigator this near significant finding indicates that differences might have become stronger if the study had been longer in terms of preparation and administration time periods.

\(^4\text{Ibid.}\)

Description of Subjects Based on Results of Parental Involvement Questionnaires

The results of the Parental Involvement questionnaire
were tallied in order to provide data which would further describe the subjects and their parents. For each of the independent variables used in statistical procedures, a percentage figure was tabulated. This raw data is reported in Tables 7 and 8. Findings of the study were based on statistical procedures; the following reporting is meant only as descriptive data. All figures in Table 8 represent percentages of each group and of the total N respectively.

**TABLE 7**

**DESCRIPTION OF CONSTANT VARIABLE - INVENTORY OF PERFORMANCE ABILITY SCORES**

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<tr>
<th>Group</th>
<th>N</th>
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<td>Group</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>2--age</td>
<td>12 yrs.</td>
<td>18</td>
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<tr>
<td></td>
<td>13 yrs.</td>
<td>47</td>
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<td>14 yrs.</td>
<td>35</td>
</tr>
<tr>
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<td>59</td>
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<tr>
<td></td>
<td>8th</td>
<td>41</td>
</tr>
<tr>
<td>4--sex</td>
<td>boys</td>
<td>18</td>
</tr>
<tr>
<td></td>
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<tr>
<td>5--years played</td>
<td>2 yrs.</td>
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<td>3 yrs.</td>
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<td>6--years of private lessons</td>
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<td>1 yrs.</td>
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<td>2 yrs.</td>
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<td>7--practice per week</td>
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TABLE 8 - Continued

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TABLE 8 - Continued

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</tr>
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<td>B</td>
</tr>
<tr>
<td>23--student attends professional concerts</td>
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<td></td>
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<tr>
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<td>23</td>
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</tr>
<tr>
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</tr>
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<td>sometimes</td>
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<td>27</td>
</tr>
<tr>
<td>always</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>24--parents attend school concerts</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>rarely</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>sometimes</td>
<td>18</td>
<td>7</td>
</tr>
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<td>always</td>
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<td>86</td>
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</table>

Correlations and Regression Analysis:

Inventory of Performance Ability Scores to Twenty-three Variables

Correlations

Program BMD02R--stepwise regression--was used to answer the question: which variables of involvement were most related to performance ability? The twenty-three variables were as follows:

1. Inventory of Performance Ability score.
2. Student's age.
3. Student's grade.
4. Student's sex.
5. Number of years of violin experience.
6. Number of years of private lessons on violin.
7. Number of practice hours per week.
8. The family owns a piano.
9. The family owns a metronome.
10. The family owns a record player.
11. The family owns a tape recorder.
12. The family owns books about music.
13. The family owns recordings by violinists.
14. The student plays other instruments.
15. A parent assists with the student's practice.
16. A parent listens to the student's practice.
17. Mother plays (or played) an instrument.
18. Father plays (or played) an instrument.
19. Mother practices now.
20. Father practices now.
21. Siblings play instruments.
22. Parents attend professional concerts.
23. Students attend professional concerts.
24. Parents attend school concerts.

These variables with correlation coefficients are arranged in a correlation matrix in Table 9. Figures underlined indicate relationships which are significant at .05 level. Decimal points before each figure are not shown.
### TABLE 9

CORRELATION MATRIX - VARIABLES OF PARENTAL INVOLVEMENT QUESTIONNAIRE AND INVENTORY OF PERFORMANCE ABILITY

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<td>095</td>
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Figures underlined indicate significance at .05 level.
Decimal points (before each figure) have been removed to save space.
Of principle interest in this matrix are those variables with significant relationships to IPA scores (variable 1). Horizontal column one shows that significant correlations are indicated between IPA scores and the number of years a student has played the violin (variable 5), the number of years of private lessons (variable 6), ownership of a metronome (variable 9), ownership of professional classical recordings (variable 13), and parental attendance at school concerts (variable 24). Near significant correlations are also observed between IPA scores and amount of practice time spent per week (variable 7), and how often a parent listens to a student practicing (variable 16). Correlations reported in the matrix are frequently between obviously related variables such as age and grade (variables 2 and 3), or between grade and years played (variables 3 and 5).

These obviously related variables will not be discussed, but others point out relationships which would seem to describe family involvement in a student's musical activities. For example, maleness was significantly related to whether or not the father had played an instrument and to a boy's experience with a second instrument. This might indicate that boys are particularly influenced by the participation of their fathers.

The number of years that a student had played violin was related to the number of years of private lessons. Thus it would seem that private lessons usually came after a certain interval of experience in school situations. The amount of
experience also related to a student's attendance at professional concerts and recitals.

The number of years of private study was related significantly to the amount of practicing done per week. This would seem to indicate that students who study privately practice more.

The amount of practice time spent was influenced by a parent's habit of listening to, or assisting with, such practice. Also students who practice more most often owned metronomes and record players.

The ownership of musical apparatus like pianos, tape recorders, and records was greatly interrelated with other musical activities. Ownership of a piano, for example, correlated significantly with eleven variables including attendance at school and professional concerts, with a parent (mother) who has, and still does, play an instrument, with brothers and sisters playing instruments, and with parent(s) who assist in practice. Similar patterns were observable for ownership of a metronome and for the existence of records and books on music in the home. The correlations also show that experience on a second instrument is related to the fact that both parents have played instruments themselves; and attendance at school and professional concerts relates often to many other musical activities.

These relationships serve to further describe the
activities of the families of student violinists who perform well.

Regression Analysis

Table 10 contains a summary of the stepwise regression analysis for the twenty-four variables. In the first column the variables are listed by number in the order in which they were added to each successive regression equation. The second column lists the cumulative multiple correlation coefficients ($R$) for the independent variables' relationship with Inventory of Performance Ability scores. The third column contains squared coefficients ($R^2$). The increase in variance added by each variable is listed in the fourth column. Variables used were:

1. Inventory of Performance Ability score.
2. Student's age.
3. Student's grade.
4. Student's sex.
5. Number of years of violin experience.
6. Number of years of private lessons on violin.
7. Number of practice hours per week.
8. The family owns a piano.
9. The family owns a metronome.
10. The family owns a record player.
11. The family owns a tape recorder.
12. The family owns books about music.
13. The family owns recordings by violinists.
14. The student plays other instruments.
15. A parent assists with the student's practice.
16. A parent listens to the student's practice.
17. Mother plays (or played) an instrument.
18. Father plays (or played) an instrument.
19. Mother practices now.
20. Father practices now.
21. Siblings play instruments.
22. Parents attend professional concerts.
23. Students attend professional concerts.
24. Parents attend school concerts.
## TABLE 10

**SUMMARY: RELATIONSHIP BETWEEN INVENTORY OF PERFORMANCE ABILITY SCORES AND CONTRIBUTIVE VARIABLES**

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<td>14</td>
<td>.8061</td>
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(Tolerance insufficient for further computation.)
As can be seen in Table 10, variable 6, namely the number of years of private lessons, accounts for 41.19 percent of the total variance of Inventory of Performance Ability (IPA) scores. Each of the other variables contributes a successively lower percent of the total variance. The total contribution of variables is 64.81 percent of the variance, leaving 35.19 percent contributed by unknown factors which could include either random variation in the sample or the failure to include variables that make these contributions.

The dotted line after the first eleven entries marks a point beyond which each variable contributes less than one percent of the total variance. Those variables above the line account for 62.25 percent of the variance. Variable 6 (number of years of private study) contributed 41.19 percent. The other 21.06 percent of variance above the line is contributed by the following activities (variables):

A Parent listens to the student's practice.
The family owns a record player.
The family owns recordings by violinists.
Parents attend professional concerts.
Parents attend school concerts.
Mother plays an instrument and practices it.
Student's sex.
Student's grade.
Number of practice hours per week.
The contribution of a student's sex and his grade was obviously caused by the distribution of the subjects for this study. The other variables would help to further describe the parental involvement of students with high Inventory of Performance Ability scores. That is, a good performer seems to have parents who attend school and professional concerts and mothers who have instrumental experience. Their parents listen to their practicing more frequently than the parents of less able performers; and they own record players and recordings of professional violinists.

A summary of the findings reported in this chapter and conclusions based on the data are reported in Chapter V.
CHAPTER V

SUMMARY AND CONCLUSION

Purposes and Procedures

The purpose of this study was to determine whether or not significant relationships exist between parental involvement and the performance ability of seventh and eighth grade violinists. In addition, this study sought to determine whether or not significant differences exist between four different treatment groups in the preparation of a performance task. Selected involvement variables were also tested to determine their influence on the performance ability of seventh and eighth grade violinists.

The design of original measures was necessary in order to assess the parental involvement in the musical activities of violinists, and to inventory their performance ability. Case studies of selected high involvement families were conducted to provide material for the Parental Involvement questionnaire. Musical examples containing techniques to be evaluated were selected to become a performance task and ultimately the Inventory of Performance Ability. These examples were tested by a panel of experts.
The study involved the preparation of a performance task by sixty-four seventh and eighth grade violinists from four middle school orchestras. The performance task material was prepared by all subjects. A different treatment technique which controlled the amount and kind of help given the student in the process of practicing was used in each of the four groups. The preparation time for all groups was limited to three hours with group A practicing for the total time with the assistance of the investigator; group B practiced for half the time with the investigator's help and half with the help of a parent; group C prepared for the total time with parental assistance; and group D practiced with no assistance. Following his performance preparation, each student was taped in performance of two musical examples from the prepared task material and was evaluated by a team of judges as to his ability to perform with accurate intonation, rhythm, articulation and tempo maintenance. The validity of the Inventory of Performance ability was established by a comparison with the teachers' rankings of their students.

The parents of each student were sent a Parental Involvement questionnaire about parent and student musical background and activity. These questions were tallied with equal point distribution and the total scores were used as the measure of Parental Involvement.

The principle statistical procedures used in the study
included Pearson product-moment correlations to test the presence of relationships between parental involvement and performance ability. Pearson correlations were also used to test relationships between the Inventory of Performance Ability scores and teachers' rankings of students. An analysis of variance procedure (BMD01V) was used to determine the existence of differences between subject groups and between treatments. Stepwise regression analysis (BMD02R) was used to determine the influence of involvement variables on performance ability scores. In addition, percentages were calculated from answers to selected variables from involvement questionnaires in order to describe the subjects.

Summary of the Findings

Pearson Correlations

Hypothesis number one, namely, the ranking of Inventory of Performance Ability scores is significantly related to teacher rankings (Each orchestra director ranked students according to performance ability.), was retained. Pearson product-moment correlations for each of the four treatment groups were significant beyond the .001 level. Correlation coefficients for each of the groups were:

group A - .79


group B - .85


group C - .96


group D - .76
A significant relationship (.001) was observed between Parental Involvement scores and Inventory of Performance Ability scores. Thus hypothesis number two, namely, parental involvement is significantly related to the performance ability of seventh and eighth grade violinists, could also be accepted. The correlation coefficient was .42.

Analysis of Variance

Null hypothesis number one stated that there is no significant difference between the parental involvement of parents of students in the four treatment groups. This null hypothesis was retained on the basis of a non-significant F ratio (.5644), thus indicating a lack of difference or the presence of similar characteristics of parental involvement in the four treatment groups.

Similar analysis of variance procedures using Inventory of Performance Ability scores made it necessary to retain null hypothesis number two, namely, there is no significant difference between the performance ability of students in the four treatment groups. A non-significant F ratio of 2.2055 was observed. This lack of significant difference could have been a result of the short time period of the experimental treatments.
Percentages to Describe the Population by Variables From Parental Involvement Questionnaire

The mean score for the Inventory of Performance Ability for the sixty-four students finally used was 23.39 of a maximum possible 40. Twenty percent of these students were twelve years old, 47 percent were thirteen and 33 percent were fourteen. Fifty-six percent were seventh graders and 44 percent were in the eighth grade. Twenty-two percent were boys and 78 percent were girls. The majority (70 percent) had played the violin for four years. Fifty percent had not taken private lessons. Eight percent of the students never practiced at home, 30 percent practiced less than one hour per week, 42 percent spent two to four hours per week practicing and 20 percent practiced more than four hours per week. Most families owned pianos (63 percent), record players (98 percent), tape recorders (80 percent), and books about music (79 percent), while 31 percent owned a metronome and 67 percent owned classical recordings. Fifty-nine percent of the students played instruments in addition to the violin. Parents varied in the amount of assistance they give their student during practice. Thirty-six percent stated they never helped and others helped "rarely" or only "sometimes." In contrast, 92 percent of the parents listened to their student's practice at least "sometimes." Sixty-three percent of the mothers and 52 percent of the fathers
have played an instrument, while only 19 percent of the mothers and 13 percent of the fathers still practice an instrument. Sixty-nine percent of the students had brothers or sisters who also played an instrument. Attendance at professional concerts was divided, with 50 percent who attended at least sometimes. These figures were the same for student attendance at such concerts. Ninety percent of the parents stated that they "always" attended the school performances of their student.

These percentages represent the twenty-three variables that were used with the Inventory of Performance Ability scores to determine which variables provided influence on that ability score.

Regression Analysis

A correlation matrix was arranged to correlate-variables to each other. This matrix indicated variables significantly related to performance ability were the number of years a student has played the violin (.455), the number of years of private lessons (.642), ownership of a metronome (.340), ownership of classical records (.315), amount of practice time per week (.249), how much a parent listens to a student's practice (.249), and parent attendance at school concerts (.270).

A stepwise regression analysis picked out variables in
the order of their influence on Inventory of Performance Ability scores. Variable six (the number of years of private lessons) accounted for 41 percent of the variance while the other variables together accounted for only 24 percent. The remaining 35 percent can be attributed to unknown factors. Variables were listed by the regression procedure in the following order:

- Number of years of private lessons on violin.
- A parent listens to the student's practice.
- The family owns a record player.
- The family owns recordings by violinists.
- Parents attend professional concerts.
- Parents attend school concerts.
- Mother practices now.
- Mother plays (or played) an instrument.
- Student's sex.
- Student's grade.
- Number of practice hours per week.
- Siblings play instruments.
- Father practices now.
- Number of years of violin experience.
- Father plays (or played) an instrument.
- The family owns a metronome.
- The family owns books about music.
- The family owns a tape recorder.
- The family owns a piano.
Student's age.
A parent assists with the student's practice.
The student plays other instruments.
Students attend professional concerts.

Conclusions

Based on the results obtained from this investigation of the relationship between parental involvement and the performance ability of seventh and eighth grade violinists, it may be concluded that:

1. Based on correlations with teacher rankings, the Inventory of Performance Ability is a valid measure of the performance abilities of the seventh and eighth grade violinists who were used as subjects for this study.

2. The involvement of the parents of the students was not significantly different between the four treatment groups.

3. Based on a three hour experimental treatment, no difference is observable between the performance ability of violinists who were prepared in the following situations: teacher assistance, teacher and parent assistance, parent assistance, and no assistance. Findings were positive but not significant. This would perhaps be improved with a longer preparation period.
4. Of the twenty-three variables tested for their contribution to the performance ability of seventh and eighth grade violinists, the most significant contributor was the number of years that a student had spent taking private lessons.

5. Other contributors to the performance ability of seventh and eighth grade violinists were (in order of significance):
   A parent listens to the student's practice.
   The family owns a record player.
   The family owns recordings by violinists.
   Parents attend professional concerts.
   Parents attend school concerts.
   Mother practices now.
   Mother plays (or played) an instrument.
   Student's sex.
   Student's grade.
   Number of practice hours per week.
   Siblings play instruments.
   Father practices now.
   Number of years of violin experience.
   Father plays (or played) an instrument.
   The family owns a metronome.
   The family owns books about music.
   The family owns a tape recorder.
   The family owns a piano.
Student's age.
A parent assists with the student's practice.
The student plays other instruments.
Students attend professional concerts.

Implications

Based on the conclusions of this study, there seem to be implications for the procedures of instrumental teachers and parents of instrumental students. The following suggested activities seem to contribute to the performance ability of violin students. Parental concern for these items might assist the development of young instrumentalists.

1. Students should study with a private teacher in addition to school lessons and rehearsals.
2. A parent should listen to the student while he practices.
3. Students should have the opportunity to use the following musical apparatus: record player and records, metronome, books about music, tape recorder, and piano.
4. Parents and students should attend concerts and recitals by professionals whenever possible.
5. Parents should attend their student's school performances.
6. A musically involved family usually has several family members who play instruments or participate in musical performance themselves.

7. As much practice time should be spent as possible. Better performers seem to spend more time in practice.

8. Experience on a second instrument might be beneficial to the instrumental student.

9. Parents should provide help with practice at home. This help may take many forms such as those suggested by the practice helps in Appendix D.

Recommendations for Further Research

The following recommendations are made in the light of the limitations of this study:

1. The study should be replicated with specific regard to the length of the experimental treatment. A longer preparation period with more varied performance materials and techniques would be useful.

2. There is a need for a more universally applicable string performance test. The development and testing of such a vehicle would greatly assist research.
3. The present study should be replicated with other age groups.

4. The present study could be replicated for other instruments.
APPENDICES
APPENDIX A

LETTER TO GROUP B

May 1973

Dear Parents,

Your student has been selected to participate in a short research project to determine relationships between parental involvement and performance ability. The study will be conducted at Columbus area schools during May by the music department of Ohio State University. Your student's string teacher has been consulted and scheduling has been arranged so that the project does not interfere with regular work. It should instead prove to be a valuable learning experience for your student.

Your assistance is very necessary to the success of this study. You can help by following the directions below as carefully as possible.

Your student has been given several short pieces for violin and a list of practice helps. He has been instructed to practice them at home for 1½ hours between now and May 9 with the help of a parent or parents. That help may take many forms. Musical knowledge is not necessary. The list of practice helps should assist you. It is important that a record of practice time be kept so that we know that the 1½ hours required were indeed spent. I suggest that practice time be divided into short segments of perhaps 15 minutes each.

Following this experiment a questionnaire will be sent home for you to fill out and return. Your cooperation will be greatly appreciated as success depends on a 100% response. Thank you.

Sincerely

Gerald R. Doan
APPENDIX B

LETTER TO GROUP C

May 1973

Dear Parents,

Your student has been selected to participate in a short research project to determine relationships between parental involvement and performance ability. The study will be conducted at Columbus area schools during May by the music department of Ohio State University. Your student's string teacher has been consulted and scheduling has been arranged so that the project does not interfere with regular work. It should instead prove to be a valuable learning experience for your student.

Your assistance is very necessary to the success of this study. You can help by following the directions below as carefully as possible.

Your student has been given several short pieces for violin and a list of practice helps. He has been instructed to practice them at home for three hours between now and May 11 with the help of a parent or parents. That help may take many forms. Musical knowledge is not necessary. The list of practice helps should assist you. It is important that a record of practice time be kept so that we know that the three hours required were indeed spent. I suggest that practice time be divided into short segments of perhaps 15 minutes each.

Following this experiment a questionnaire will be sent home for you to fill out and return. Your cooperation will be greatly appreciated as success depends on a 100% response. Thank you.

Sincerely,

Gerald R. Doan
APPENDIX C

LETTER TO GROUP D

May 1973

Dear Parents,

Your student has been selected to participate in a short research project to determine relationships between parental involvement and performance ability. The study will be conducted at Columbus area schools during May by the music department of Ohio State University. Your student's string teacher has been consulted and scheduling has been arranged so that the project does not interfere with regular work. It should instead prove to be a valuable learning experience for your student.

Your assistance is very necessary to the success of this study. You can help by following the directions below as carefully as possible.

Your student has been given several short pieces for violin and a list of practice helps. He has been instructed to practice them at home for 3 hours between now and May 14. It is important that he receive no help from anyone. He must however keep a record of his practice time so that he and I know that the 3 hours were indeed spent. I suggest that practice time be divided into short segments of perhaps 15 minutes each.

Following this experiment a questionnaire will be sent home for you to fill out and return. Your cooperation will be greatly appreciated as success depends on a 100% response. Thank you.

Sincerely,

Gerald R. Doan
APPENDIX D

PRACTICE HELPS FOR PARENTS

"Helping" a student practice may include the following activities:

- scheduling practice time
- listening to practice
- criticizing
- praising
- checking assignment to help student understand definitions

Read the definitions with your child. Compare what he does with what the definition says he should do.

If you are able, then:

- check rhythm
- count time
- correct intonation
APPENDIX E

PRACTICE RECORD
KEPT BY GROUPS B, C AND D

This represents the amount of time you have.
You should practice a total of __ hours.

May

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Record the number of minutes practiced on the calendar.
Give total minutes here ____________.

Student's signature ____________
Parent signature ____________
APPENDIX F

PRACTICE GUIDES FOR STUDENTS IN GROUPS B, C, AND D

Intonation:
1. Don't be satisfied with knowing which finger to put down on which string. Also decide where to put it.
2. Check the key signature and the accidentals so you know where the half steps and whole steps are. Watch for changes.

Rhythm and Tempo:
1. Count correctly.
2. Compare note values.
3. Maintain a steady tempo by checking with a metronome or tap your foot.

Articulation:
1. Separate notes with no marking should be played on the string, one bow per note, with smooth bow changes.
2. Notes connected by slurs should be smooth with no break in the bow. Bow changes also should be smooth.
3. A separate note with a dot (staccato) should be short and stopped with the bow on the string. Use one bow per note.
4. Hooked notes should be short and on the string. The bow continues in the same direction but stops between notes.
5. Always concentrate on a good sound. There are no dynamic markings so no variation is necessary. Vibrato when possible.
APPENDIX G

LETTER TO ALL PARENTS
SENT WITH QUESTIONNAIRE

May 1973

Dear Parents:

For the last few weeks your student has been involved in a research project for my dissertation at the Ohio State University. As a final part of this study, I need your answers to a series of questions about parental involvement and musical background. Would you please complete the enclosed questionnaire and return it to school with your student as soon as possible. A 100% return is necessary for the success of this project; your cooperation is greatly appreciated.

Thank you.

Sincerely,

Gerald R. Doan

Return requested by May ____. 
APPENDIX H

QUESTIONNAIRE

PARENTAL INVOLVEMENT IN MUSIC

NAME OF STUDENT
(last)..............................................(first)..............................................(middle)

NAME OF PARENT..................................................................................................................

TELEPHONE NO.__________________________STUDENT'S DATE OF BIRTH_________________

STUDENT'S SCHOOL_______________________GRADE________________________

THIS IS NOT A TEST. PLEASE CHECK, CIRCLE OR FILL IN ANSWERS AS SPECIFIED.
"PARENT" OR "YOU" REFERS TO EITHER MOTHER OR FATHER
"STUDENT" REFERS TO THE CHILD WHOSE NAME APPEARS ABOVE.

DO NOT OMIT ANY ITEMS.

1. Do you (or did you) play an instrument?
   father - _______YES _______NO INSTRUMENT_________________________
   mother - _______YES _______NO INSTRUMENT_________________________

2. Do you practice now? father _______YES _______NO
   mother _______YES _______NO

3. Do you play in an organization - orchestra, band, or other group?
   father _______YES _______NO
   mother _______YES _______NO

4. Do you sing in a church choir or other vocal group?
   father _______YES _______NO
   mother _______YES _______NO

5. How many other children do you have? _________

6. Do they play instruments? _______YES _______NO
   If "YES," list the instruments________________________

7. How long has your student played the violin? _________

8. Does he/she take private lessons? _______YES _______NO
   If "YES," for how long? _________
9. Do you pay for the lessons? __YES __NO
   If "NO," who does?____________________________________

10. Do you require regular home practice? __YES __NO

11. How much time per week does your student spend practicing the violin?
   _______NONE
   _______LESS THAN ONE HOUR
   _______TWO TO FOUR HOURS
   _______MORE THAN FOUR HOURS

12. Do you ever accompany your student with any instrument? __YES __NO

13. Does your student ever play with a piano accompanist (non-family)? __YES __NO
    If "YES," do you pay that person? __YES __NO

14. Do you or your student own a record player? __YES __NO
    piano? __YES __NO
    tape recorder? __YES __NO
    metronome? __YES __NO
    music stand? __YES __NO

15. Does your student own his instrument? (as opposed to rented or borrowed). __YES __NO

16. Do you see that your student's instrument is repaired when necessary? __YES __NO

17. Do you encourage participation in musical activities other than those involving the violin? __YES __NO

18. Do you send your student to summer camps, clinics, or workshops? __YES __NO

19. Do you have books about music in your home? __YES __NO

20. Have you ever purchased a music book for your student other than those required by teachers? __YES __NO

21. Does your student play any instrument besides the violin? __YES __NO
    If "YES," list instruments____________________________________
22. Do you own recordings by prominent violinists or symphonies? (i.e. Heifetz, Stern, New York Philharmonic, etc.)

   ___NONE
   ___A FEW
   ___MANY (10 or more)

23. Does the family listen to recordings together?

   ___NEVER
   ___OCCASIONALLY
   ___OFTEN

PLACE AN "X" UNDER THE CORRECT RESPONSE.

never rarely sometimes always

24. Do you visit your student’s school string classes or rehearsals?

25. Does your student play solos for small audiences or friends?

26. Does your student play solos for large audiences (50 people or larger)?

27. Do your other children attend performances by your student?

28. Do you attend your student’s private lessons?

29. Do you take notes at private lessons?

30. Do you control your student’s practice environment? (no distractions, etc.)

31. Do you listen to your student practice?

32. Do you assist with practice?

33. Do you praise your student during practice?
34. Do you criticize your student during practice?

35. Do you provide transportation to lessons, rehearsals, etc.?

36. Do you attend your student's school performances?

37. Do you attend other school concerts?

38. Do you praise your student after his performances?

39. Do you criticize your student after his performances?

40. Do you attend concerts, recitals, etc. by prominent musicians?

41. Do you take your student to these performances?

42. Do you make music together as a family?

43. Do you discuss music (i.e. at the dinner table)?

44. Does your student ever have friends in to play music?

45. Please indicate who filled out this form.
   ___ MOTHER  ___ FATHER  ___ BOTH
APPENDIX I

DEFINITIONS

Intonation: the pitch of tones in relationship to tonality, ("intuneness" and "pitch accuracy" are synonyms)...
or/the ability to put the right finger on the right string in the right place on the fingerboard.
Rhythmic Accuracy: playing a note for the correct duration in an established tempo.
Articulation: making obvious differences between the following situations:
   legato detache: one bow per note, on the string, smooth bow change.
   legato slur: multiple notes per bow, smooth bow.
   staccato: one bow per note, short, stopped, on the string.
   hooked bow: multiple notes per bow, on the string, stop between notes.
Tempo: maintaining a tempo.
APPENDIX J

PRACTICE RECORDS

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APPENDIX K

CASE STUDIES OF THE PARENTAL INVOLVEMENT
OF SELECTED SUPERIOR VIOLIN STUDENTS

During the early stages of questionnaire development this investigator approached the families of four superior instrumental students and asked them to list family activities which they considered to be supportive involvement for their child's musical development. These lists, with the investigator's and other music educators', were used to formulate questions for inclusion in the Parental Involvement Questionnaire.

NOTE: No format was suggested. Responses were paraphrased and put in list form. "The family" may represent all or only one member of the student's immediate family.

Case Study A

The family:
provides private lessons
attends all private lessons
assists in practice frequently
insists on regular practice
listens to practice
attends student's performances
pays piano accompanist to rehearse with student
provides transportation to concerts, rehearsals, lessons, etc.
provides summer music workshop
family chaperones for summer music camp
attends professional concerts
urges participation in all musical activities
maintains conducive practice atmosphere
provides quality instrument
maintains instrument
siblings practice together
purchase equipment for listening and recording in the home
recognizes success with praise
offers constructive criticism
family sings together
provides second instrument experience
both parents have played instruments
encouragement from all family members

Case Study B

The family:
provides private lessons
marks mistakes to be corrected while assisting with practice (mother has some musical training)
accompanies at the piano
attends all performances
assists in choice of music
attends lessons
praises after successes
provides transportation to a college private teacher
encourages but doesn't force
takes student to professional concerts
maintains and encourages a positive attitude

Case Study C

The family:

provides private lessons
attends lessons
insists on regular practice
assists in practice (father plays violin)
praises success
listens to practice
criticizes during practice sessions
pays an accompanist
provides transportation to concerts and lessons
attends professional concerts and school concerts
provides a good instrument
asks student to perform for relatives and friends
sends student to summer music camp
Case Study D

The family:

provides good instrument
listens to practice
provides good practice atmosphere
criticizes during practice
tries to help with problems
assists in scheduling daily practice times
shows interest in school music activities
allows and encourages listening to all kinds of music
tries not to encourage sibling competition
praises accomplishments
provides summer clinic opportunities
attends professional concerts
provides constant verbal encouragement
### Appendix L

Spearman Correlation between Inventory of Performance Ability (IPA) Scores and Teachers' Rankings (TR)

**Group A**

N = 17

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Mean 19.6706

Spearman correlation 0.7936

Significance .001
Group B

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mean 26.8333

Spearman correlation 0.8490

significance .001
Group C

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mean 20.0687

Spearman correlation 0.9551

significance .001
Group D

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mean 27.4249

Spearman correlation 0.7588

significance .001
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