DOCUMENT RESUME

ED 097 275 SO 007 842

AUTHOR Rivas, Frank W.
TITLE The First Music Assessment: An Overview. National Assessment of Educational Progress Report No. 03-MU-00.
INSTITUTION Education Commission of the States, Denver, Colo. National Assessment of Educational Progress.
SPONS AGENCY Carnegie Corp. of New York, N.Y.; Ford Foundation, New York, N.Y.; National Center for Educational Statistics (DHEW/OE), Washington, D.C.
REPORT NO R-03-MU-00
PUB DATE Aug 74
NOTE 41p.; For related document see SO 007 843
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402 (Order Report 03-MU-00; $0.60)

EDRS PRICE MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS Aesthetic Education; *Educational Assessment; Educational Research; *Evaluation; Evaluation Methods; Fine Arts; *Music; Music Activities; Music Appreciation; *Music Education; Music Techniques; *National Surveys; Tests; Theater Arts

ABSTRACT

For nine years the National Assessment of Education Progress has attempted to measure behaviors that are assumed to correlate with sensitivity to music and analytic skills typically taught in the classroom. These skills included musical performance, ability to use traditional notation, ability to discriminate and label instruments and voices, ability to recognize important aspects of music history and literature, and the disposition to listen to music and participate in musical activities. Eighty thousand individuals in four age groups were tested. Results indicate that performance, knowledge of notation and terminology, and knowledge of music history and literature rank the lowest. Knowledge of the names and sounds of musical instruments and general attitude towards music rank the highest. The general pattern is that people are involved at the simplest levels with the activity of music, while more specialized knowledge is lacking. (Author/DE)

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
A Project of the Education Commission of the States

Assessment Reports

Science, 1969-70

1	National Results	July 1970
4	Results by sex, region and size of community	April 1971
7	Results by color, parental education, size and type of community; balanced results	May 1973

Citizenship, 1969-70

2	National Results	November 1970
6	Results by sex, region and size of community	July 1971
9	Results by color, parental education, size and type of community	May 1972

Writing, 1969-70

3	National Results	November 1970
5	Results by sex, region and size of community	April 1971
8	Writing Mechanics	February 1972
10	Selected Essays and Letters	November 1972
11	Results by color, parental education, size and type of community, sex and region for objectively scored exercises	May 1973
02-GIY	General information Yearbook—A description of National Assessment's methodology, with special attention given to Reading and Literature	May 1972

Reading, 1970-71

02-R-01	Understanding Words and Word Relationships	April 1973
02-R-02	Graphic Materials	June 1973
02-R-03	Written Directions	May 1973
02-R-04	Reference Materials	July 1973
02-R-05	Gleaning Significant Facts From Passages	May 1973
02-R-06	Main Ideas and Organization	July 1973
02-R-07	Drawing Inferences	August 1973
02-R-08	Critical Reading	May 1973
02-R-09	Reading Rate and Comprehension	December 1972
02-R-20	Released Exercises	July 1973
02-R-30	Recipes, Wrappers, Reasoning and Rate: A Digest of the First Reading Assessment	April 1974
02-R-00	Summary Data	July 1974

Literature, 1970-71

02-L-01	Understanding Imaginative Language	March 1973
02-L-02	Responding to Literature	April 1973
02-L-03	Recognizing Literary Works and Characters	April 1973
02-L-04	A Survey of Reading Habits	May 1973
02-L-20	Released Exercises	April 1973
02-L-00	Summary Data	June 1973

Social Studies, 1971-72

03-SS-01	Political Knowledge and Attitudes	December 1973
03-SS-02	Contemporary Social Issues	July 1974
03-SS-00	The First Social Studies Assessment: An Overview	June 1974

Music, 1971-72

03-MU-01	The First National Assessment of Musical Performance	February 1974
03-MU-02	A Perspective on the First Music Assessment	April 1974
03-MU-00	The First Music Assessment: An Overview	August 1974

This publication was prepared and produced pursuant to agreements with the National Center for Educational Statistics of the U.S. Office of Education with additional funds from the Carnegie Corporation of New York and the Ford Foundation's Fund for the Advancement of Education. The statements and views expressed herein do not necessarily reflect the position and policy of the U.S. Office of Education or other grantors but are solely the responsibility of the National Assessment of Educational Progress, a project of the Education Commission of the States.

Education Commission of the States, Suite 300, 1860 Lincoln Street, Denver, Colorado 80203

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

A Project of the Education Commission of the States

REPORT 03-MU-00

THE FIRST MUSIC ASSESSMENT:

An Overview

August 1974

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

James A. Hazlett
Administrative Director

J. Stanley Ahmann
Staff Director

George H. Johnson
Associate Staff Director

All National Assessment reports are collaborative efforts. *THE FIRST MUSIC ASSESSMENT: An Overview* was written by Frank Rivas; Sue Oldefendt performed the data analyses for all Music reports and reviewed this volume for technical accuracy.

Further staff support was supplied by many individuals in the following departments:

Operations Department
Data Processing Department
Exercise Development Department
Research and Analysis Department
Utilization/Applications Department
Communications Department (ECS)

This publication was prepared and produced pursuant to agreements with the National Center for Educational Statistics of the U.S. Office of Education with additional funds from the Carnegie Corporation of New York and the Ford Foundation's Fund for the Advancement of Education. The statements and views expressed herein do not necessarily reflect the position and policy of the U.S. Office of Education or other grantors but are solely the responsibility of the National Assessment of Educational Progress, a project of the Education Commission of the States.

TABLE OF CONTENTS

FOREWORD

The National Assessment of Educational Progress is an information-gathering project which surveys the educational attainments of 9-year-olds, 13-year-olds, 17-year-olds and adults (ages 26-35) in 10 subject areas: Art, Career and Occupational Development, Citizenship, Literature, Mathematics, Music, Reading, Science, Social Studies and Writing. Two areas are assessed every year, and all areas are periodically reassessed in order to measure educational progress. Each assessment is the product of several years' work by a great many educators, scholars and lay persons from all over the country. Initially, these people design objectives for each area, proposing specific goals which they feel Americans should be achieving in the course of their education. These goals are reviewed by more people and then passed along to developers of tests, whose task it is to create measurement tools appropriate to the objectives.

When the exercises prepared by the test developers have passed extensive reviews by subject matter specialists and measurement experts, they are administered to a probability sample of 80-90,000 individuals. The people who comprise the NAEP sample are chosen in such a way that the results of their assessment can be generalized to an entire national population. That is, on the basis of the performance of about 2,500 9-year-olds on a given exercise, we can generalize about the probable performance of all 9-year-olds in the nation.

After assessment data have been collected, scored and analyzed, National Assessment publishes reports such as this one to present the results as accurately as possible. Not all exercise results have been released for publication. Because National Assessment will administer some of the same Music exercises again in five years to determine whether the performance level of Americans has improved or declined, it is essential that they be kept secret in order to preserve the integrity of the study. If the unreleased exercises can be discussed without revealing their content, they are examined. However, the discussion is much less detailed than it is for the released exercises.

The National Assessment of Educational Progress also publishes a *General Information Yearbook* which describes all major aspects of the assessment's operation. The reader who desires more detailed information about how National Assessment defines its groups, prepares and scores its exercises, designs its sample and analyzes and reports its results should consult *Report 03/04-GIY, General Information Yearbook.*

CHAPTER 1

THE MUSIC ASSESSMENT

The Music assessment began in the fall of 1965, when a panel of professionals convened to identify the objectives of music education. Although the group was not charged with developing exercises to measure the objectives, the panel members realized early in their deliberations that music is "...first of all a personal, aesthetic experience--in terms of composition, production or response. It is not easy to assess such an experience, and certainly not easy to set standards for it."[1]

Sensitivity to music does not readily lend itself to description or evaluation by traditional means. Of the evaluative problems unique to the arts, most stem from the fact that arts education takes place largely in the affective domain: appreciation and attitude are vastly more difficult to measure than factual knowledge.

Developing the ability to participate fully in musical experiences and thereby cultivating aesthetic sensitivity is a primary goal of music education. But because instructional programs in music aim to develop an individual's aesthetic sensitivity, they must develop along somewhat different lines than instructional programs in other academic disciplines. While other curricula generally emphasize cognitive development, the music curriculum must also concentrate on psychomotor and affective development.

National Assessment attempted to measure behaviors that are assumed to correlate with sensitivity to music. One such behavior is the performance of music. A person can perform well yet remain insensitive--or be sensitive and fail to perform well--but the two are likely to correlate to some extent. The performance program has long been an important aspect of music instruction in the schools, and the results of the performance exercises represent a significant portion of our findings.

The assessment also attempted to measure three sets of analytic skills typically taught in the classroom: the ability to use traditional notation and other graphic representations of music, the ability to discriminate and label the instruments and voices used in the performance of music, and the ability to recognize important aspects of music history and literature.

---

[1] *Music Objectives*, 1971-72 National Assessment of Music (Denver, CO: National Assessment of Educational Progress, 1970).

Finally, National Assessment attempted several affective measurements. To directly measure the affective aspect of an aesthetic response is, at the present time, almost impossible, but the assessment did measure predispositions to listen to music and to participate in certain types of musical activity. A strong predisposition to perform or listen to a piece of music probably correlates with the ability to derive satisfaction from music.

These topics--musical performance, music notation and terminology, instrumental and vocal media, music history and literature, attitudes toward music--are the five categories into which we divided the 141 exercises that were used to assess music. The topics are not hierarchial in the sense that each is a prerequisite to the next, but they do define aspects of skill or knowledge that contribute to the aesthetic sensitivity of the individual. In this report, one chapter will summarize the results for each of the five topics.

It is important to realize that dividing the exercises into five topics is not the only possible way of categorizing them. Others might cluster the exercises in different ways in order to find different types of information. The topics are only one way of juxtaposing similar exercises so that we may see a broader picture.

Exercise packages were administered to 9-year-olds, 13-year-olds, 17-year-olds and young adults from 26 to 35 years of age. Many exercises were administered to individuals at all four age levels; however, some exercises are obviously inappropriate for certain ages, and others simply bowed to higher priority exercises for a particular age level.

Exercises are generally referred to by both a two-character designation and a short description. The first digit indicates the topic (1 for performance, 2 for notation/terminology, and so on), while the second indicates both its position within the topic and whether the exercise is released. Position is alphabetical (Exercise 1A comes before 1B); released exercises are referred to by capital letters, while unreleased exercises have lower case designations. Approximately half the exercises have not been released so that they can be used again in the second Music assessment to measure any change that might have occurred over the five-year time span.

In general, the assessment covered most of the important aspects of music education. True, we would now like to have emphasized some areas more, others less, but our exercises are based on the objectives identified in 1965. Objectives for the second Music assessment incorporate the changes in emphasis which have taken place within the profession since 1965.

Clearly neither this booklet, nor future assessment reports, will answer all the questions people have about the effectiveness of music education. However, we do provide data about specific Music exercises, and these data can be generalized to statements about limited areas of music education.

Interpretation of the data is a difficult process. The results may prove encouraging from one perspective, discouraging from another. Much of the data may only confirm what the readers might already suspect, but documentation

itself is a positive and important step. Each reader will have to assimilate the data to draw his own conclusions. It is our hope that this assessment will raise and encourage questions, promote widespread discussion, serve as a stimulus for further research and help raise the quality of music education in America.

CHAPTER 2

MUSICAL PERFORMANCE

Musical performance has traditionally occupied an important position in the school music program. For the purpose of assessment, performance has been broadly defined to include not only the polished concerts of the school band, orchestra and chorus, but also the less sophisticated singing of a young child in the classroom and the tapping of an adult as he listens to a popular song. Not only in Music, but in all the subject areas, National Assessment attempts to define skills that are not limited to classrooms, but are used in daily life.

Five categories of musical performance were measured: singing familiar songs, repeating unfamiliar musical material, improvising, performing from notation, and performing a prepared piece. In this chapter, we will discuss one exercise from each of the five categories.

The performance exercises posed special problems in administration and scoring. To administer the performance exercises, the exercise administrator read the instructions to each individual respondent, played the stimulus on one tape recorder and then recorded the response on another tape recorder. The respondents were encouraged to record their voices before the administration actually began to minimize any anxiety they might feel about singing into a microphone.

After the responses were taped, a group of music professionals listened to samples of the responses and constructed scoring guidelines. These guidelines were intended to be comprehensive enough to encompass the wide variety in the quality of performances, yet objective enough to insure that a given performance would receive the same score from any scorer. Eleven graduate students in music then scored the thousands of tapes.

Singing Familiar Songs

Exercise 1B is the one exercise that best represents the ability to sing familiar songs. In the exercise, individuals were asked to sing "America," first with recorded voices (Exhibit 1), then alone (Exhibit 2). Nine-year-olds heard a children's choir singing in the key of D, while those at the three older age groups heard a mixed chorus singing in the key of C. It was hoped that these keys would be accessible to the majority of voices, especially since "America" has a range of only seven notes.

EXHIBIT 1. Percentages of Acceptable Overall Performance on Exercise 1B, part A, Singing "America" With Accompaniment

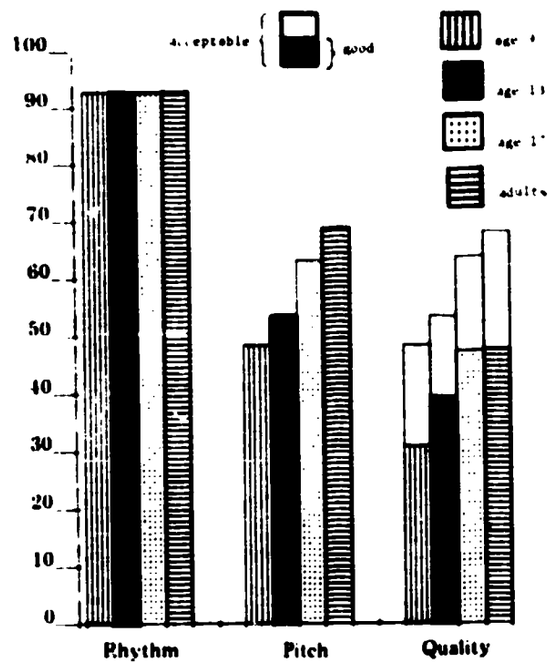
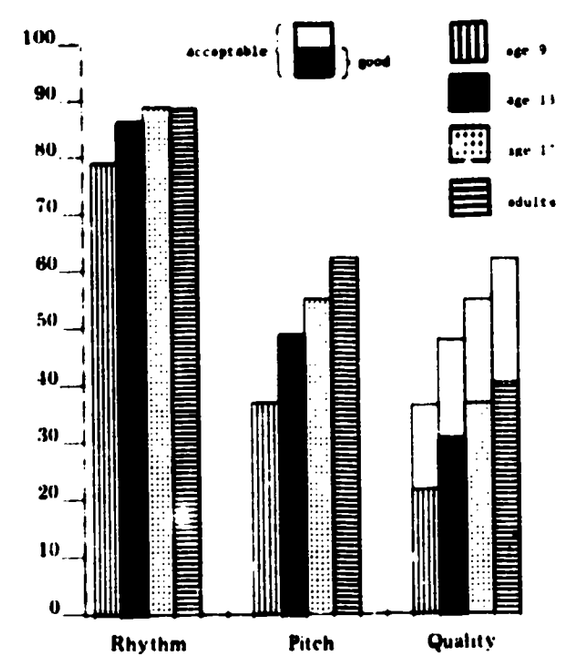


EXHIBIT 2. Percentages Whose Overall Performance Was Acceptable on Exercise 1B, part B, Singing "America" Without Accompaniment



Individuals from all age levels were scored according to the same criteria. Responses were classified as acceptable in pitch if they maintained the correct pitch in all but three notes and acceptable in rhythm if the responses included not more than three rhythmic errors. In addition, each response was given a rating for overall quality; if the response was acceptable in both pitch and rhythm, the overall quality was acceptable. The complete scoring criteria for this and the other performance exercises can be found in *The First National Assessment of Musical Performance, Report 03-MU-01* and in *The First Music Assessment: A Statistical Report* (in print).

About 90% of the individuals at each age level maintained an acceptable rhythm; however, many individuals had trouble maintaining acceptable pitch levels. Only about 40% of the 9-year-olds, 50% of the 13-year-olds, 55% of the 17-year-olds and 60% of the adults were able to do so when asked to sing alone. Almost all the individuals capable of maintaining the proper pitch attained an overall score of acceptable (Exhibit 2).

Adults attained a higher percentage of acceptable responses than did those at the other age levels on this as well as most of the other performance exercises. Many might have expected adults to be too self-conscious to give a good performance, and adults often show a slight regression from the 17-year-old level on assessment exercises in other subject areas; so the high adult percentages in the performance items are especially noteworthy. Performance abilities, it appears, continue to grow after formal education ends.

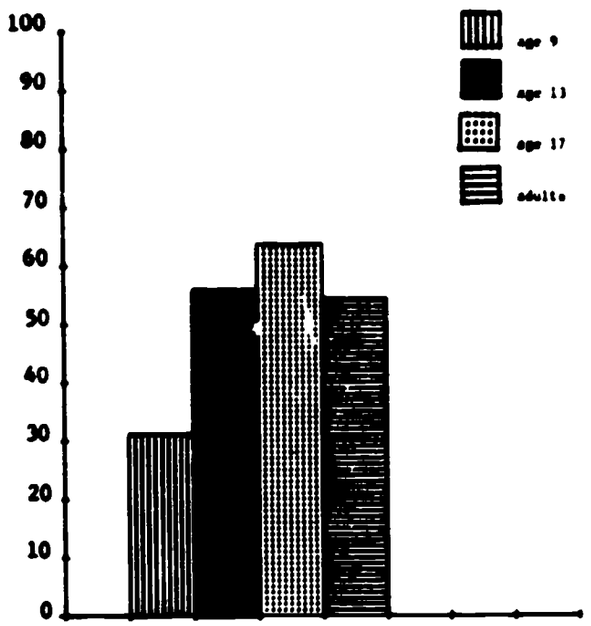
Two other released exercises that deal with singing familiar songs ask individuals to maintain a part in a round

like "Are You Sleeping?" The percentages on these exercises were lower than the percentages on the "America" exercises.

Repeating Unfamiliar Musical Material

The second two groups of exercises, repeating unfamiliar musical material and improvising, each contained a rhythmic exercise, a melodic exercise and an harmonic exercise. In this overview, we will discuss only the rhythmic exercises from each category. Rhythm exercises posted higher percentages of success than the complementary melodic and harmonic exercises.

EXHIBIT 3. Percentages of Acceptable Performance on Exercise 1D, Repeating a Rhythmic Pattern



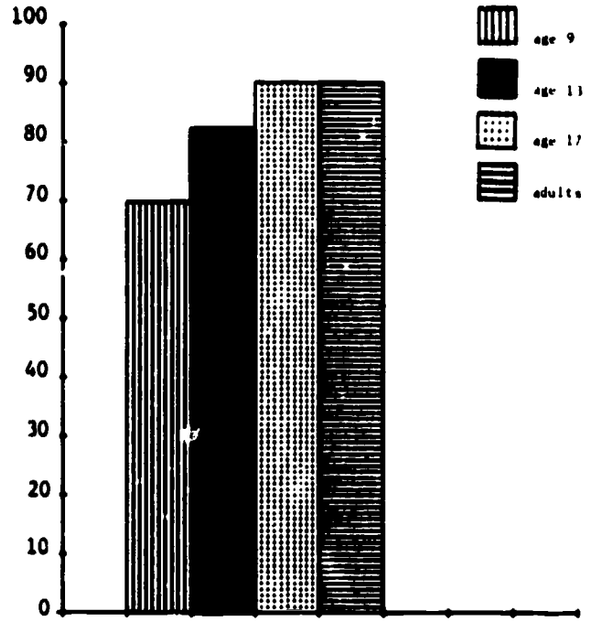
In Exercise 1D, individuals from all four age levels were asked to repeat the following pattern:

The phrase was played on claves and reproduced on a tape recorder; respondents did not actually see the notation. Some might expect the ability to repeat such a rhythmic pattern to be an almost unconscious, innate ability, certainly easier than repeating a relatively complex song like "America." In light of such an expectation, it is surprising how many individuals were not able to complete the exercise acceptably. Half or more of those from the older three age levels were able to do so; only about 30% of the 9-year-olds were able to (Exhibit 3). An acceptable response, it should be noted, allows for one error, and the failure to repeat the phrase was considered as only one error. Many of those who attained adequate scores failed to repeat the phrase, while those who scored poor generally rearranged the pattern of eighth and quarter notes. This is one of the few performance exercises on which the adult level was somewhat lower than the 17-year-old level of performance.

Improvising

In Exercise 1G, individuals were asked to improvise a rhythmic accompaniment to a relaxed, syncopated jazz selection of moderate tempo (m.m. 120). The selection, performed by piano and voices, consisted of 24 measures in 4/4 meter. When the exercise was administered to school children, the children were given a pair of bongos on which to perform; however, in the adult

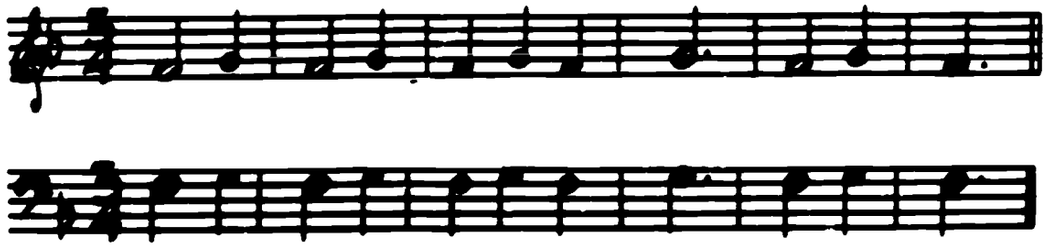
EXHIBIT 4. Percentages of Acceptable Performance on Exercise 1G, Improvising a Rhythmic Accompaniment



assessment, an attache case was provided. About 90% of the 17-year-olds and adults maintained some rhythmic accompaniment (even 70% of the 9-year-olds did), thus attaining an acceptable score (Exhibit 4). But considerably fewer individuals attained a good score by adding embellishments that contributed to the performance: less than 20% of any group did so. Improvisation, it should be noted, called for an abandonment of one's musical inhibitions. While many were willing to mechanically accompany a selection, few were willing to risk a greater degree of creativity. These results may have both musical and sociological relevance; perhaps they show that individuals cannot improvise a creative rhythmic accompaniment, or perhaps they show that individuals are embarrassed to do so.

Performing From Notation

Sight-reading exercises ranged from the very simple to the relatively difficult. Exercise 1J represents one of the easier exercises. Individuals were presented with the following lines of music; girls were asked to sing the first line, and boys, the second:



Individuals could begin on any tune they wished, singing numbers, letters or la, la, la.

Few individuals were able to complete the exercise successfully. No group attained a percentage of success greater than 12%.

Performing a Prepared Piece

The fifth group of performance exercises included two especially long items. In Exercise 1L, administered to individuals at all four age levels,

individuals were asked whether they now play a musical instrument, what instruments they play and how long they have played them. Then they were asked to perform two pieces on one of those instruments, a piece of their own choice that they had prepared and a small selection which they were asked to sight-read. In Exercise 1M, administered only to 17-year-olds and adults, individuals were asked to classify their voice types and to sing two selections, one of their own choice and one by sight. In this report, we will discuss only Exercise 1L, the one that involves instrumental performance.

Singing familiar songs, repeating unfamiliar musical material and improvising require no special training in music. Instrumental performance, on the other hand, generally requires technical training beyond the scope of what is taught in the classroom. Altogether, about 25% of the 9-year-olds, 35% of the 13-year-olds, 25% of the 17-year-olds and 15% of the adults claimed to play an instrument of some type. Many played the standard band and orchestral instruments; keyboard instruments were more popular than any other type of instrument, and became increasingly popular with age; and folk instruments were listed by a large number of respondents. Folk instruments include the guitar, ukulele, banjo, mandolin, lute, concertina, autoharp, recorder, Jew's harp, zither, harmonica, dulcimer, sweet potato and ocarina.

Several individuals indicated playing more than one instrument. Eleven percent of the 13 and 17-year-olds played more than one, and 6% of the adults did.

In playing a selection of their own choice, individuals were evaluated along two dimensions, the difficulty of the piece of the quality of the performance. The *Selective Music Lists* prepared by the National Interscholastic Music Activities Commission were used as guides in scoring the difficulty of pieces. An acceptable performance on any piece was one that followed the score closely. Of the 9-year-olds who played for us, almost all chose easy pieces; about half gave poor performances, about half, acceptable performances. Of the 13-year-olds, about three quarters chose to play an easy piece, and about three quarters gave an acceptable performance. Seventeen-year-olds were evenly divided: about half chose an easy piece and about half a medium or difficult piece; about 80% of the group gave an acceptable performance. Most adults, like 13-year-olds, chose easy pieces; about 70% of them gave an acceptable performance. Altogether, almost two thirds of those who played gave an acceptable performance.

Looking back on the performance items we have discussed in this chapter, we find a relatively high percentage of individuals are able to sing familiar songs, repeat short rhythmic phrases and improvise a complementary rhythmic pattern. Of these three activities, we would certainly expect people to indulge most frequently in singing familiar songs, and in fact, the largest percentages of people showed some proficiency in this area. In almost all of these exercises, proficiency increased with age. As might be expected, fewer individuals were able to participate in musical activities that involve sight-reading or instrumental performance.

CHAPTER 3

MUSICAL NOTATION AND TERMINOLOGY

Even though understanding musical notation and terminology does not in itself enhance an individual's aesthetic sensitivity, a familiarity with notation and terminology is an important tool for performing and listening to music. Three closely related sets of exercises were developed to measure abilities in this area. The first set deals with the vocabulary commonly used to describe music elements, forms, tempi, dynamics and interpretive characteristics. Exercises in this group deal with the meanings of simple words like *loud* and *soft* as well as with more sophisticated musical terms like *largo*. The second set deals with music notation. At the simplest level, exercises involve recognizing the treble clef; at a more difficult level, exercises require reading a key signature or explaining the meaning of a crescendo. In the third set of exercises, individuals are asked to follow notation while listening to a piece of music. In one case, they follow pedagogical line notation for "Are You Sleeping?" In another case, they follow a 12-part score from the beginning of the Beethoven *Symphony No. 7*.

Vocabulary

Of the many terms assessed, we will limit this discussion to *loud, soft, phrase, rhythm, harmony, melody* and to those exercises that involve describing an actual piece of music in these terms.

Exercise 2C, "Loud-Soft," presented a piece of music the second half of which was markedly louder than the first half. Individuals were then asked to determine which musical element had changed during the performance from the following list of choices: the second half is louder, softer, slower or exactly the same. Between 90 and 95% of those from each age level were able to determine that the dynamic level had increased (Exhibit 5). In its extreme simplicity, this exercise represents the only case in which a clear majority of the population was able to use the correct musical term.

Exercise 2D, "Phrase," is the one released example that deals with the ability to use the word *phrase* and standard phrase lettering. The exercise began with a definition of standard phrase lettering: as a piano played "Good Bye, Old Paint," a voice identified consecutive phrases as A, A, B and A. Then a piano played an AABA selection twice and individuals were asked to choose between four phrase structures, AAAB, AABA, AABB, ABBA. Approximately 60% of the 17-year-olds, 50% of the 13-year-olds and adults, and 25% of the 9-year-olds were able to choose the correct phrase structure (Exhibit 6).

EXHIBIT 5. Percentages of Success for Exercise 2C, "Loud-Soft"

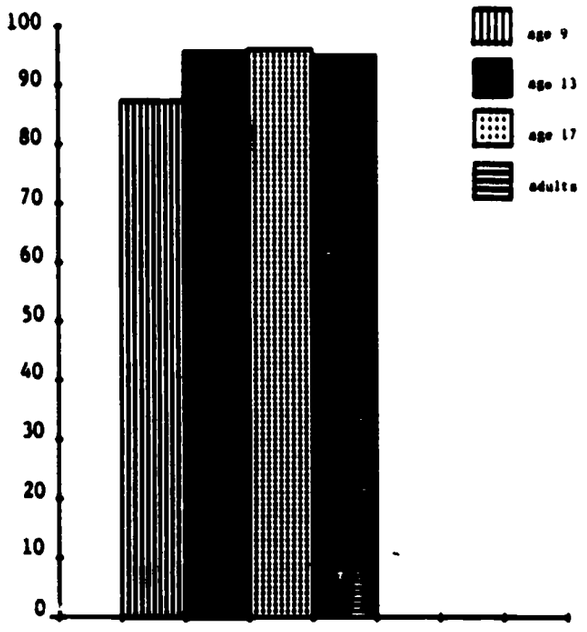
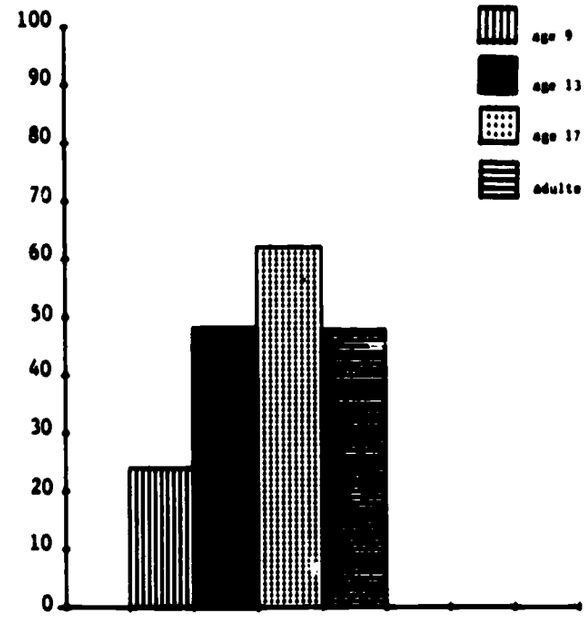


EXHIBIT 6. Percentages of Success for Exercise 2D, "Phrase"

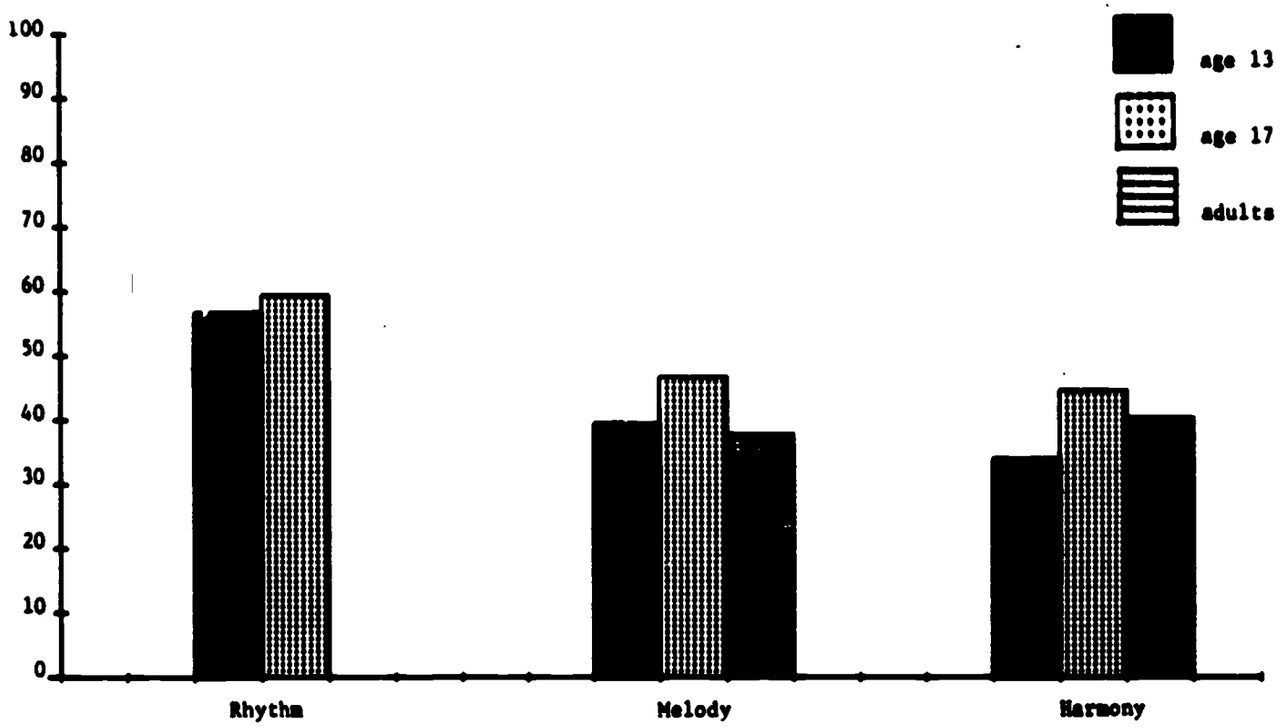


A short series of exercises, both released and unreleased, measured abilities to use the words *rhythm*, *melody* and *harmony*. These exercises were administered only to 13-year-olds, 17-year-olds and adults. In each of these exercises, individuals were presented with two versions of an eight-measure phrase played on the piano and then asked whether the difference was rhythmic (as it was in Exercise 2E), melodic (Exercise 2e, part A) or harmonic (Exercise 2e, part B). In Exercise 2E, the first version moved in even quarter and half note patterns, while the second version introduced dotted quarter and eighth note patterns. Exercise 2e, part A, reversed the direction of the melodic line to create the change. For 2e, part B, the first version used simple tonic-dominant triads, while the second used dominant seventh chords.

Especially when we consider that guessing alone can conceivably account for 33% correct responses, the results of these exercises were relatively low. Fewer than 60% were able to identify the rhythmic change, and fewer than 50% were able to identify melodic or harmonic changes (Exhibit 7).

It must be emphasized that we included two types of vocabulary items, those that require simple definitions and those that involve describing an actual piece of music. Of the two types, the latter, which requires listening skill in addition to familiarity with terminology, is clearly the more difficult and the only type we have discussed in this overview. From these exercises, we might hypothesize that terms like *loud* and *soft* appear to be the only ones people can use appropriately, and that, though they might be familiar with dictionary definitions of *rhythm*, *melody* and *harmony*, many people are unable to use these terms in the context of a musical example.

EXHIBIT 7. Percentages of Success for Exercises 2E, "Change of Rhythm"; 2e, "Change in Melody"; and 2e, "Change in Harmony"



Basic Notation

Knowledge of notation also appears to be limited to recognition, not function; many can give the name of a particular musical symbol but do not know how to use it. Many of these exercises were administered only to the older groups, and all but one of the exercises in this section simply required a person to recognize an aspect of notation and name it. Items to be identified included key signatures, clef signs, sharps and flats, note names and note values. An example is Exercise 2L, in which individuals are asked to identify the note D. From a list of five choices, about 60% of the 13 and 17-year-olds correctly identified the note. For adults, the percentage of success dropped to 40% (Exhibit 8).

Another exercise, 2K, required only the most minimal knowledge of function, yet shows a marked decline from the other percentages in this section. The exercise required knowing that two eighth notes and one quarter note represent the same duration, but less than 30% of any age group gave this answer (Exhibit 9).

EXHIBIT 8. Percentages of Success for Exercise 2L, "Note D"

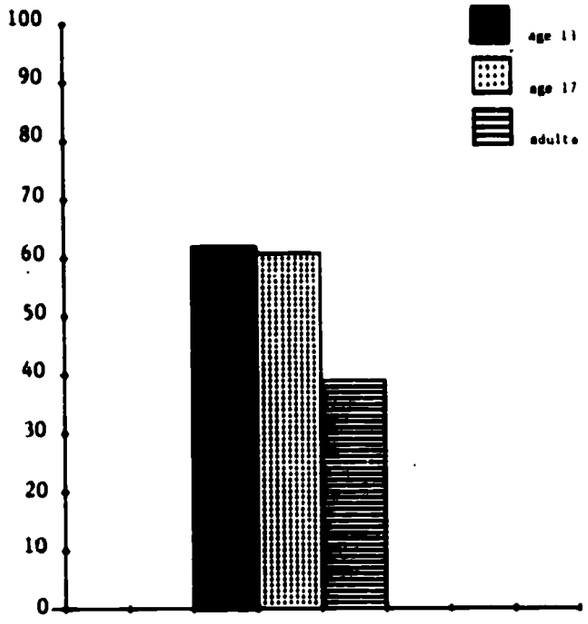
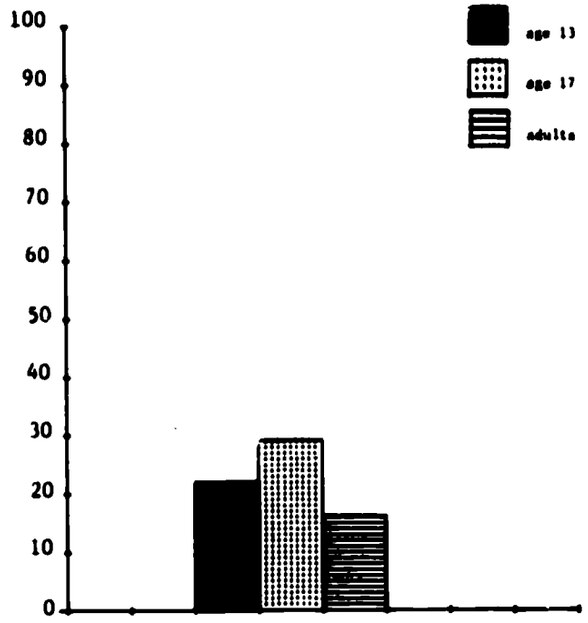


EXHIBIT 9. Percentages of Success for Exercise 2K, "Two Eighths Equal a Quarter"

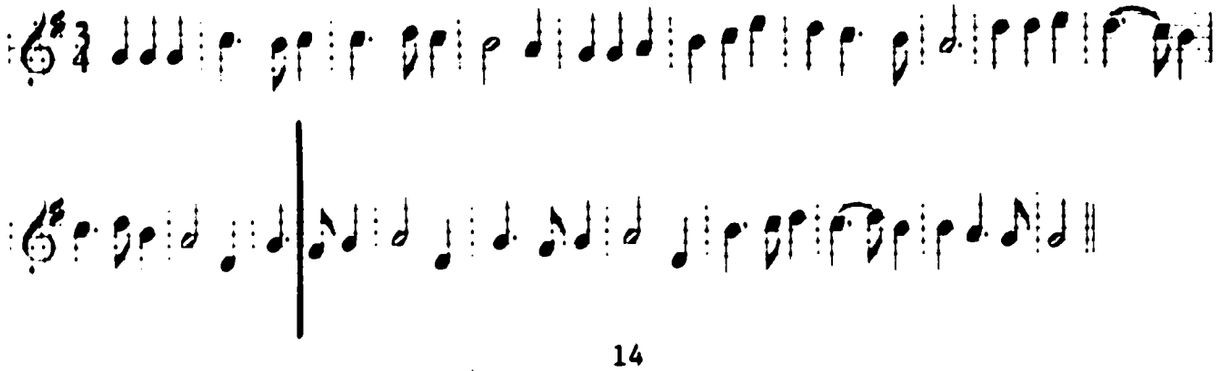


Two observations about age are common to the basic notation exercises. First, 13-year-olds generally attain percentages as high as 17-year-olds, perhaps because the junior high school frequently offers the last required general music course. Second, adults show a marked decline from the 17-year-old level. In fact, they sometimes scored lower than the 9-year-olds.

Score Reading

Especially when contrasted to low percentages in the basic notation exercises, the score-reading percentages are quite high. Even though many do not understand the details of the standard notation system, they are able to follow the general contour of a musical line.

Exercise 2U is one of six similar exercises that asked individuals to indicate the point at which the recorded music stopped by drawing a vertical line through the score. The following line was performed by solo trumpet at a moderate tempo:



Although less than 20% of the 9-year-olds were able to correctly identify the break-off point (there seems to be some evidence that this was due to confusion over the word *vertical*), about half of the 13-year-olds and almost 70% of the 17-year-olds were able to do so (Exhibit 10). These results indicate a fairly good ability to follow the general outline of a melody and to relate it to a graphic representation.

However, when asked to identify a discrepancy between the heard melody and the printed score, most people failed (Exhibit 11). Exercise 2S asked people to determine which note was played differently from the following simple melody:

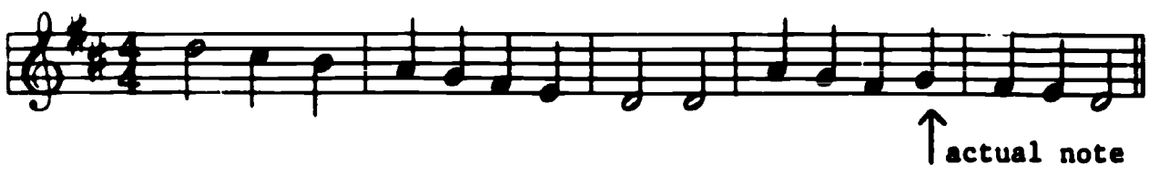


EXHIBIT 10. Percentages of Success for Exercise 2U, "Vertical Line"

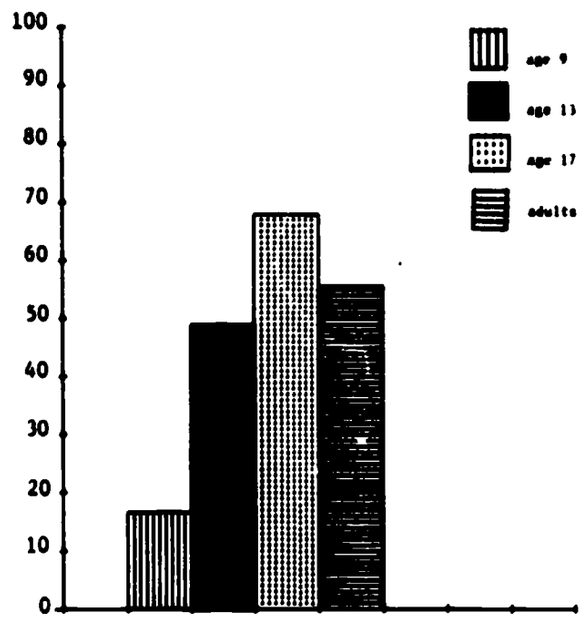
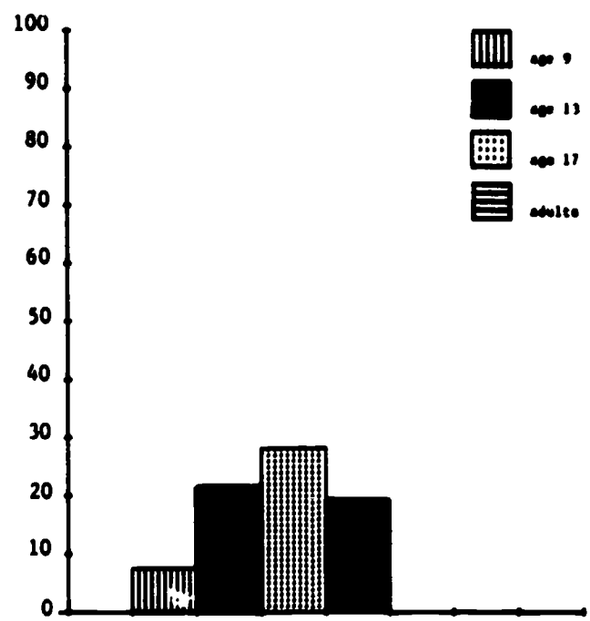


EXHIBIT 11. Percentages of Success for Exercise 2S, "Note Discrepancy"



Musical Notation and Terminology

There seem to be narrow limits to knowledge of musical notation and terminology for most individuals. It is clear from the vocabulary items that most individuals can discriminate between terms like *loud* and *soft*. However, terms like *steps, skips, phrase, melody, harmony* are not words that most individuals use appropriately. While many are able to identify clef signs, note names, sharps and flats, very few have the understanding to know that two eighth notes are equivalent to a quarter note. While many are able to follow the general contour of a score, few are able to detect specific deviations in what they are hearing from what they are seeing.

However, in at least one way the results of the notation/terminology exercises are encouraging. We have found that by the age of 13, children have as clear a grasp of many musical concepts as do their elders. It seems possible that continuing general music education beyond the junior high school level could yield a much greater musical literacy.

CHAPTER 4

INSTRUMENTAL AND VOCAL MEDIA

One step in developing the musical sensitivity of an individual is developing his ability to discriminate between the various tone colors utilized in the performance of music. The exercises in this topic require discrimination among performing media and also require verbal identification of the instrument or voice that produces a given timbre.

Three types of exercises were used to measure the ability to discriminate among instrumental and vocal media. The first group involved presenting a taped recording of a short performance, sometimes by one instrument or voice, sometimes by several. Respondents were then asked which instruments or voice types were performing. We attempted to minimize the problem of verbal identification in some of the exercises administered to the younger groups by asking only whether, for example, the sound was made by an instrument that is played by blowing or by striking. However, most exercises required a specific instrument name or one of four voice types--soprano, alto, tenor, bass. Some of the more difficult exercises required identifying the instrument that played the leading part in a more complex work.

Exercises in the second group involved asking respondents to identify the picture of a certain instrument or instrument family.

The third group of exercises measured knowledge about how certain instruments are played--by blowing, by striking, by plucking or by drawing a bow across them.

Those who could identify the timbre of a given instrument were generally also able to identify those instruments visually and were able to describe the method by which they are played. Indeed, for any given instrument, the differences between aural recognition, visual recognition and performance practice exercises were minimal--a fact that might have important implications for testing.

Aural Recognition

The percentages of individuals of all ages who were able to identify the timbres of various instruments, even when the instruments were played in an ensemble, were high. However, percentages were a little lower with certain instruments and with the various voice types.

EXHIBIT 12. Percentages of Success for Exercise 3B, "Trumpet Solo"

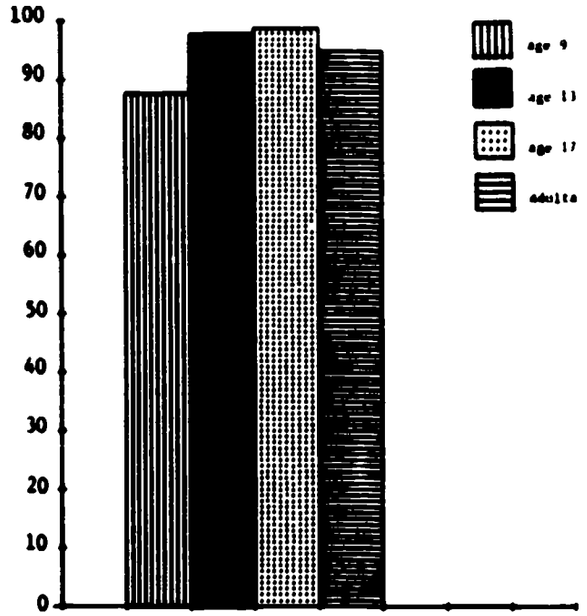
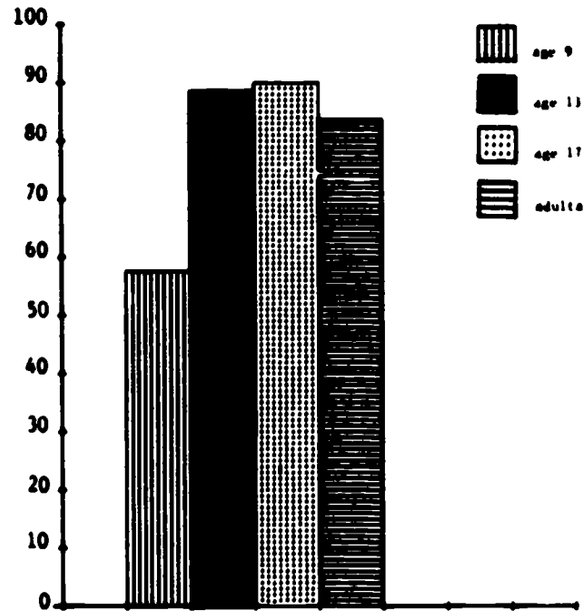


EXHIBIT 13. Percentages of Success for Exercise 3C, "Piccolo Solo"



High percentages in aural discrimination exercises are perhaps most encouraging because these skills are so very basic to the understanding and appreciation of music. The notation and terminology exercises of the last chapter are more removed from the immediate musical experience. Notation and terminology are necessary: they permit us to communicate our musical ideas from one to another and from generation to generation. But it may be comforting to know that even if these lines of communication are closed to many, at least the direct experience is present, along with the ability to discriminate and label.

The small difference between familiar and less familiar orchestral instruments is demonstrated by two exercises, 3B, "Trumpet Solo," and 3C, "Piccolo Solo." In both exercises, respondents heard a short selection characteristic of the particular instrument. The trumpet solo was the "Promenade" theme from Moussorgsky's *Pictures at an Exhibition*, and the piccolo solo was from Sousa's "Stars and Stripes Forever." At the upper three age levels, more than 95% were able to identify the trumpet and almost 90% were able to identify the piccolo (Exhibits 12 and 13). For the 9-year-olds, the difference was greater: 88% were able to identify the trumpet, and 58%, the piccolo.

The trumpet was by no means the most familiar instrument. Percentages of success were even higher on an unreleased exercise that involved identifying a keyboard instrument--all ages were very close to 99%.

Equally high percentages occurred in the various exercises that involve identifying one instrument in an ensemble performance. In general, individuals had no more difficulty with these than with the solo identifications.

EXHIBIT 14. Percentages of Success for Exercise 3G, "Saxophone Lead"

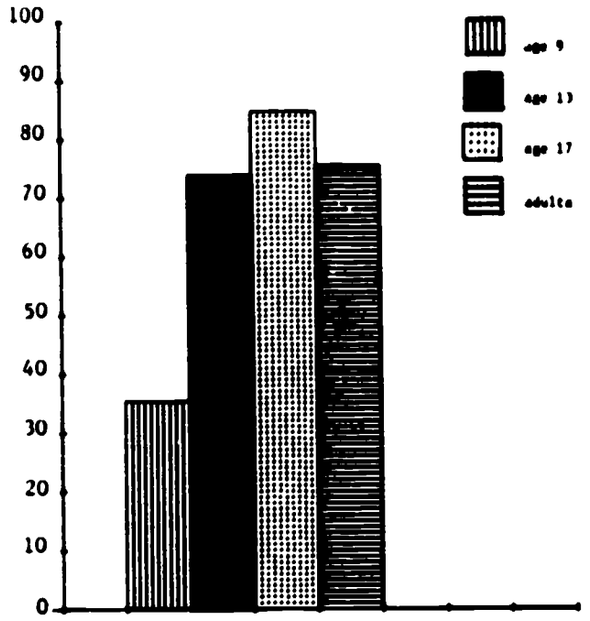
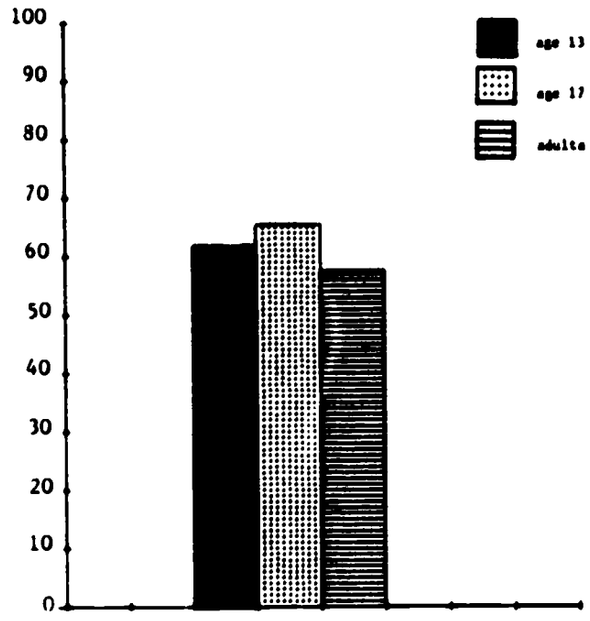


EXHIBIT 15. Percentages of Success for Exercise 3L, "Violin and Cello"



The ensemble exercises also demonstrated that people have a little more difficulty identifying instruments playing in the jazz idiom. The only released example of this phenomenon is Exercise 3G, "Saxophone Lead." After hearing a tape of Charlie Parker playing Tristano's "Victory Ball," individuals were asked to choose between the flute, trombone, saxophone and trumpet as the lead part. Only about 35% of the 9-year-olds were able to correctly choose the saxophone, but about three quarters of those in the older age levels were able to do so (Exhibit 14). These percentages, of course, are not particularly low except in the context of the other aural recognition questions.

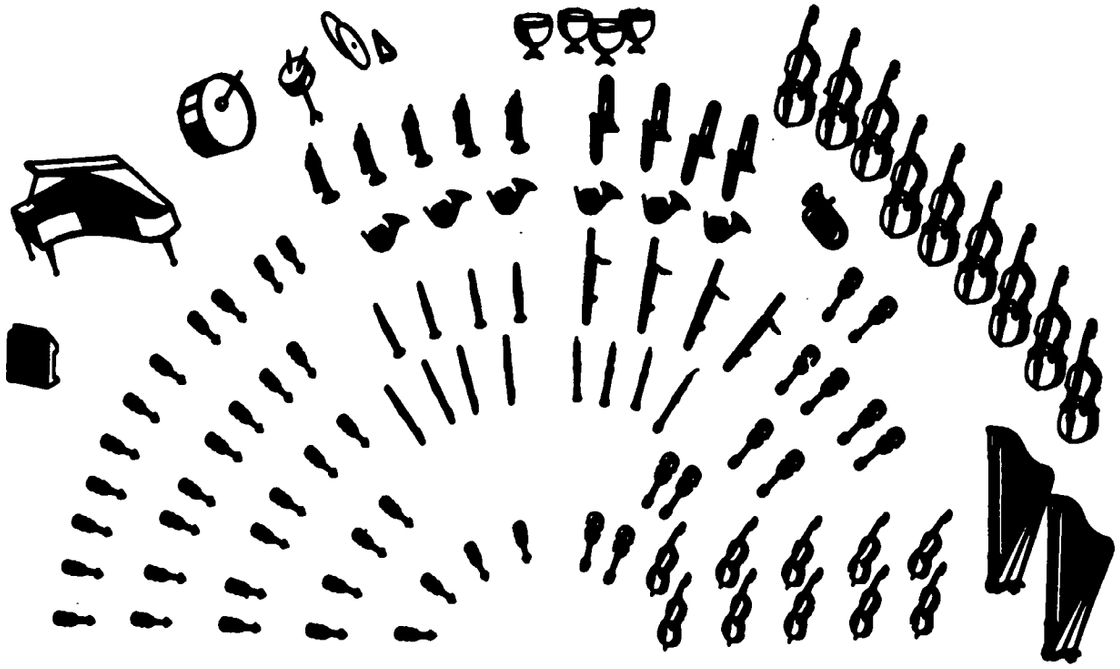
Several exercises that required individuals to identify both instruments in a duet were also included. The percentages were much lower than in the previous questions, but the exercises were notably difficult. Exercise 3L, "Violin and Cello," began with a tape of the Bach *Invention No. 4 in D Minor*. Administered to the three older age groups only, the exercise gave four choices, all string instruments, from which to choose: two violins, violin and viola, violin and cello and two double basses. About 60% of the respondents were able to correctly identify the violin and cello as the instruments used in the performance (Exhibit 15).

Four aural recognition exercises were especially difficult for all ages. In a series of excerpts from opera and art songs, the three older age groups were presented with one example of each of the four major voice types. Less than half of most age groups were able to identify alto, tenor and bass voices, but about three quarters were able to identify the soprano voice.

Although many cannot label the voice types, most people appear to have a definite ability to recognize and identify the timbres of most orchestral instruments. There is, of course, room for improvement, but it appears that most Americans already have this foundation on which to build a sensitivity to music.

Visual Recognition

Individuals generally found it easy to identify pictures of particular instruments, but the one released visual recognition exercise complicates an otherwise simple process. In Exercise 3P, individuals from all age groups were asked to circle all the cellos, all the bassoons, all the bass drums and all the trumpets in four successive diagrams like the following:



Former Seating Plan, Philadelphia Orchestra, Eugene Ormandy Music Director

Trumpets were identified most readily, by more than 80% of the upper three age levels; cellos and bassoons were circled least readily, by about 40% of the upper groups. Perhaps the relatively low percentages of success reflect little knowledge of orchestral seating plans and an unfamiliarity with the graphic conventions used in the diagram.

Performance Practices

It appears that the many individuals who were able to identify the sound of an instrument and the picture of an instrument can also explain in basic

terms how the instrument is played. The one difficulty in interpreting the performance practice exercises is that they contain only two choices in addition to "I don't know." An example is Exercise 3S, "Played by Blowing," which presents a list of 11 instruments and asks if each is played by blowing air into it. Since the choices are only "Yes" and "No," it is conceivable that up to 50% could have guessed the correct response.

The list in Exercise 3S included the following instruments: clarinet, cymbals, guitar, harp, oboe, saxophone, trombone, trumpet, tuba, violin and xylophone. The upper three age groups had correct responses above the 90% level for all instruments except the oboe and xylophone; percentages for these two instruments were in the upper 70s and 80s. Nine-year-olds generally attained scores about 10 percentage points lower than the other three age levels.

Instrumental and Vocal Media

That an individual is able to discriminate between the various instruments and voice types is no clear indication that he appreciates music, but it does indicate an awareness of timbre upon which appreciation can be built. The media exercise required individuals not only to discriminate between the sounds of various instruments, but also to label the instruments. It is likely that the low percentages on the four voice exercises were not the result of a lack of discrimination, but were the result of an unfamiliarity with the traditional labels. On most other exercises, however, the percentages of success were quite high.

CHAPTER 5

MUSIC HISTORY AND LITERATURE

Knowledge of history and literature may not be essential to the development of an individual's aesthetic sensitivity. Yet those who are most sensitive to music tend to want to learn more about the history and literature. Or perhaps those who are familiar with a large variety of types and styles tend to be more sensitive. Whatever the direction of causality, it is likely that the two characteristics very often co-exist.

This chapter includes measures of knowledge about the periods of music history, musical genres and styles, and music literature. In measuring knowledge of history and literature, we include not only the traditional European art music of the eighteenth and nineteenth centuries, but also popular music, folk music, music of earlier periods, and electronic music.

Most of the questions about the periods of music history were of the traditional pencil-and-paper variety. We asked people to indicate the chronological order of five broad style periods, to identify representative composers from each period and to match period names with short descriptions of their characteristics. Other questions required classifying unidentified recorded performances into one of the periods.

Exercises in the second group required less knowledge of chronology, but did require the ability to discriminate between the styles of several recorded selections. Several exercises in this group, for example, ask which of three works were probably composed by the same person. Other exercises ask for the names of various genres and jazz styles.

The final group of exercises asks for the composer, title or words of several recorded selections. Some are traditional American songs, others, familiar classical selections. For the most part, history and literature exercises were not administered to 9-year-olds.

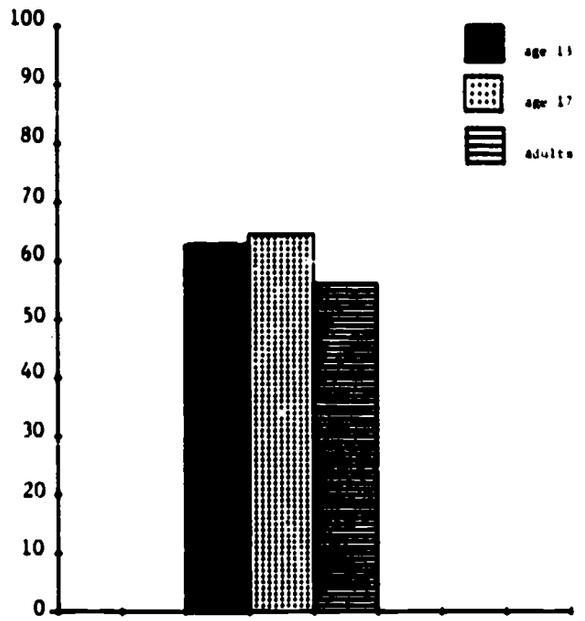
Percentages for these exercises t ded to be very low. In general, people did not recognize excerpts from compositions in the standard repertoire like Beethoven's *Fifth Symphony* or the "Hallelujah Chorus." Moreover, it appears that most individuals do not command the knowledge of the history to recognize five broad style periods of European art music. Renaissance, Baroque and Classical music blend into an ill-defined pre-Romantic period for most Americans.

Nevertheless, individuals are generally able to recognize style similarities and differences if they are not required to label the style. Even

relatively fine discriminations can be made in this way. In addition, many individuals are able to recognize and label jazz styles. In fact, Americans seem to know American music of all kinds (jazz, blues, Sousa marches, traditional songs) better than they know European art music.

Periods in Music History

EXHIBIT 16. Percentages of Success for Exercise 4A, "Periods in Order"



The most elementary exercise about style periods asked only that five period labels be put in chronological order. Exercise 4A, "Periods in Order," presented four lists from which to choose, and about 60% selected the correct order--Renaissance, Baroque, Classical, Romantic, Modern (Exhibit 16).

The percentages able to categorize musical selections into one of the five style periods were much lower--with the notable exception of an excerpt from the Tschaikovsky *Symphony No. 5*, which about 60% of the 17-year-olds classified as Romantic. Exercise 4B, "Identifying Style," presented eight short excerpts and asked for the style period of each. The percentage who correctly identified the Tschaikovsky piece was higher than were the percentages for the two modern compositions that were played, the Stravinsky *Rite of Spring*, which was correctly classified by about 40% of the 17-year-olds, and the Schoenberg *String Quartet No. 2 in F-sharp Minor*, correctly classified by less than 10% of the same age level (Exhibit 17).

Many recognized that the "Sanctus" from the Palestrina *Missa Aeterna Christi Munera* represented an older style of music and correctly placed the piece in the Renaissance, but other pre-Romantic selections--the Bach *Brandenburg Concerto No. 1 in F Major*, the Mozart *Horn Concerto No. 4 in E-flat Major*, the Haydn *String Quartet in G Major* and the Vivaldi *L'estro Armonico*--were classified as Renaissance, Baroque and Classical with almost equal frequency.

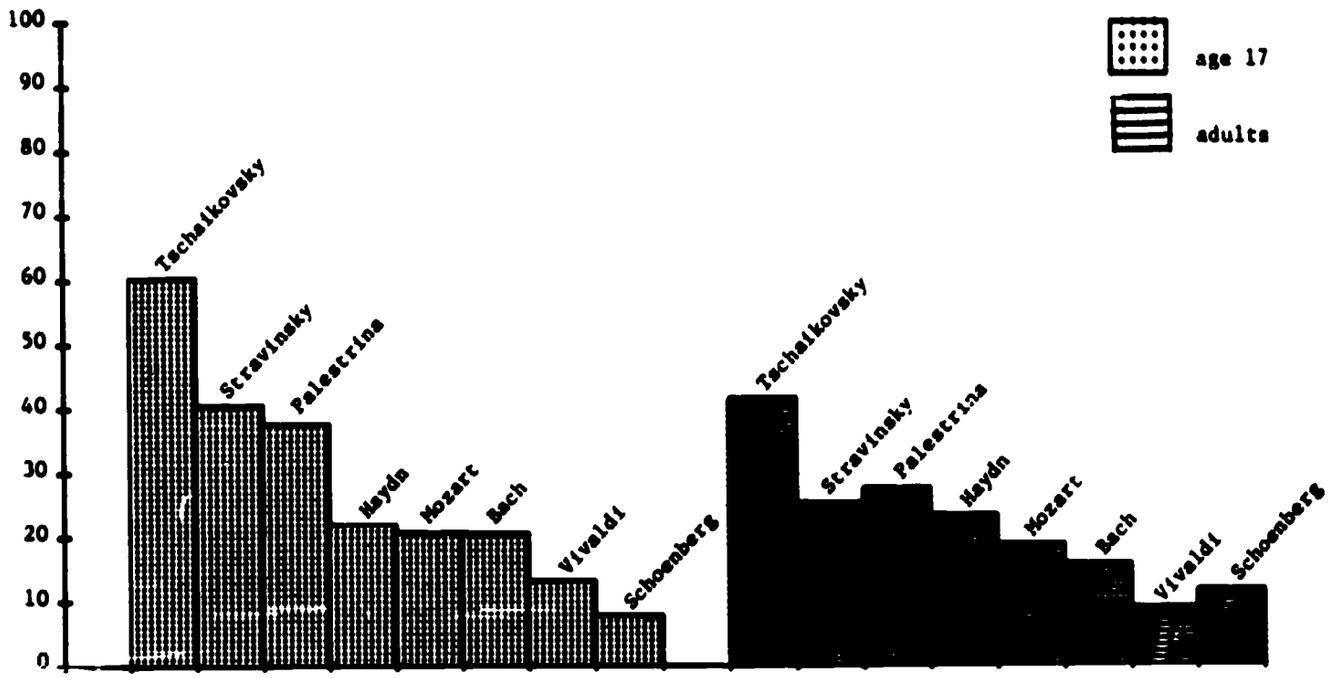
Adult percentages on Exercise 4B were lower than those for 17-year-olds, especially when the 17-year-olds attained relatively high percentages.

Musical Genres and Styles

There were two distinct groups of genre/style exercises in the assessment. The first presented selections from European art music, but did not ask that

these selections be labeled with style periods; instead the exercises only asked that individuals recognize style similarities. The second group presented selections and asked for genre labels (like round, concerto, blues, rock) and for the names of various jazz styles. Even though these exercises were similar to Exercise 4B, the percentages of success were much higher.

EXHIBIT 17. Percentages of Success for Exercise 4B, "Choosing Style"



Exercises 4G, "Chopin," and 4H, "Mozart," are two from the first group. The following instructions were given to 13-year-olds, 17-year-olds and adults: "Musical works by the same composer often sound similar. Listen carefully to three musical examples. Which examples were probably composed by the same person?" The works in 4G consisted of excerpts from the Chopin *Etude*, op. 10, No. 7; the Bartok *Allegro Barbaro;* and the Chopin *Etude* op. 25, No. 7. The works in 4H appear to require a finer discrimination: the Mozart *Symphony No. 15*, the Mozart *Symphony No. 17* and the Brahms *Academic Festival Overture*. In both exercises, about 60% were able to identify the similarities of style (Exhibits 18 and 19).

Not only can people recognize similarities between jazz pieces, but many can label particular styles. In Exercise 4K, five jazz selections were played

EXHIBIT 18. Percentages of Success for Exercise 4G, "Chopin"

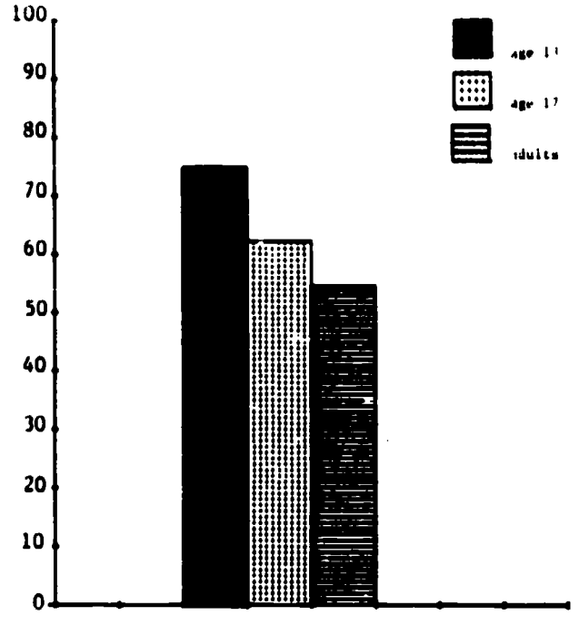
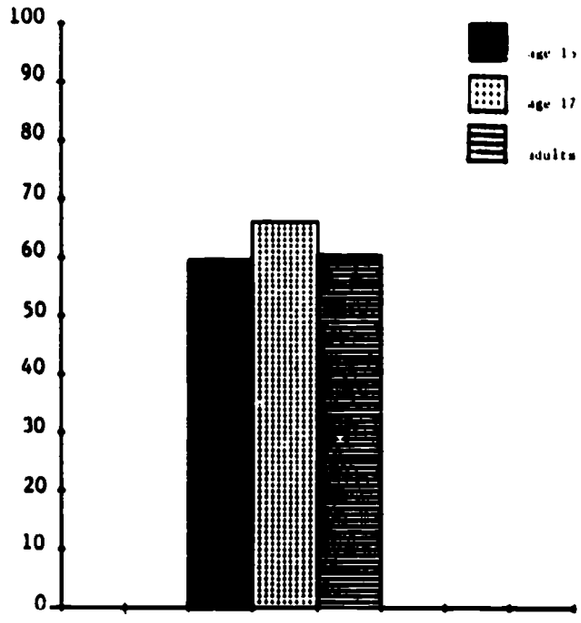


EXHIBIT 19. Percentages of Success for Exercise 4H, "Mozart"



and people were asked to classify them as ragtime, boogie-woogie, Chicago school (early 1930s) or modern. The excerpts were from the Cannonball Adderly Quintet playing "You Got It," Hines' "My Monday Date," an improvised boogie-woogie by pianist Dapogny, Scott Joplin's "Maple Leaf Rag" and Brubeck's "Unisphere." In two cases, over 60% were able to identify the style correctly (Exhibit 20).

Music Literature

Individuals of all ages seem to be capable of identifying traditional songs, but very few are able to identify classical selections, even of the most standard repertoire.

"America the Beautiful," "This Land is Your Land" and "When the Saints Go Marching In" are three released traditional songs that were presented to individuals from all four age levels. Since the tunes were played by a pianist, songs could be identified either by title or by the opening lyrics. When allowances were made for slight mistakes in the title or lyrics, "America the Beautiful" was recognized by about 50% of those from the upper three age levels; percentages for the other two songs were 30 to 40 percentage points higher (Exhibit 21).

By way of contrast, the percentages able to identify classical selections that are generally considered to be familiar were much lower. In some cases, only 3 or 4% of the population was able to identify the selections by either composer or title; occasionally the percentages dropped to less than 1%. Four excerpts from Exercise 40, "Familiar Classics," were released: the Beethoven *Fifth Symphony*, "On the Trail" from the *Grand Canyon Suite*, the "Hallelujah

EXHIBIT 20. Percentages of Success for Exercise 4K, "Jazz Styles"

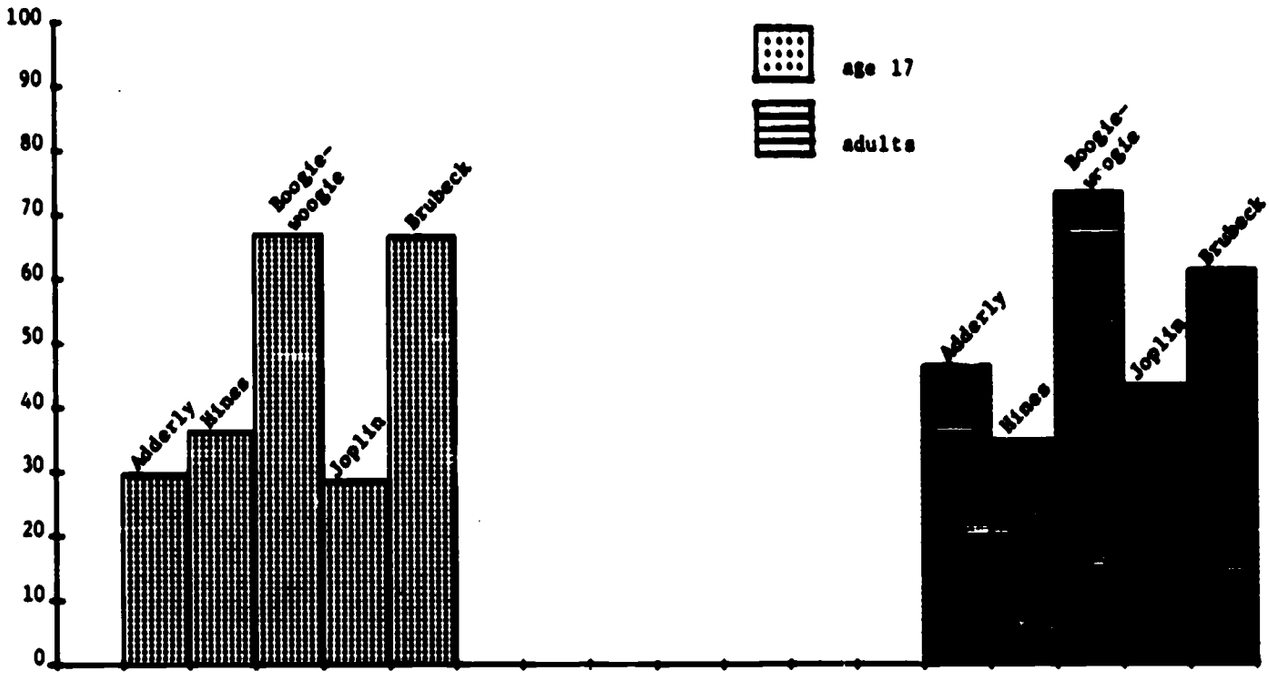
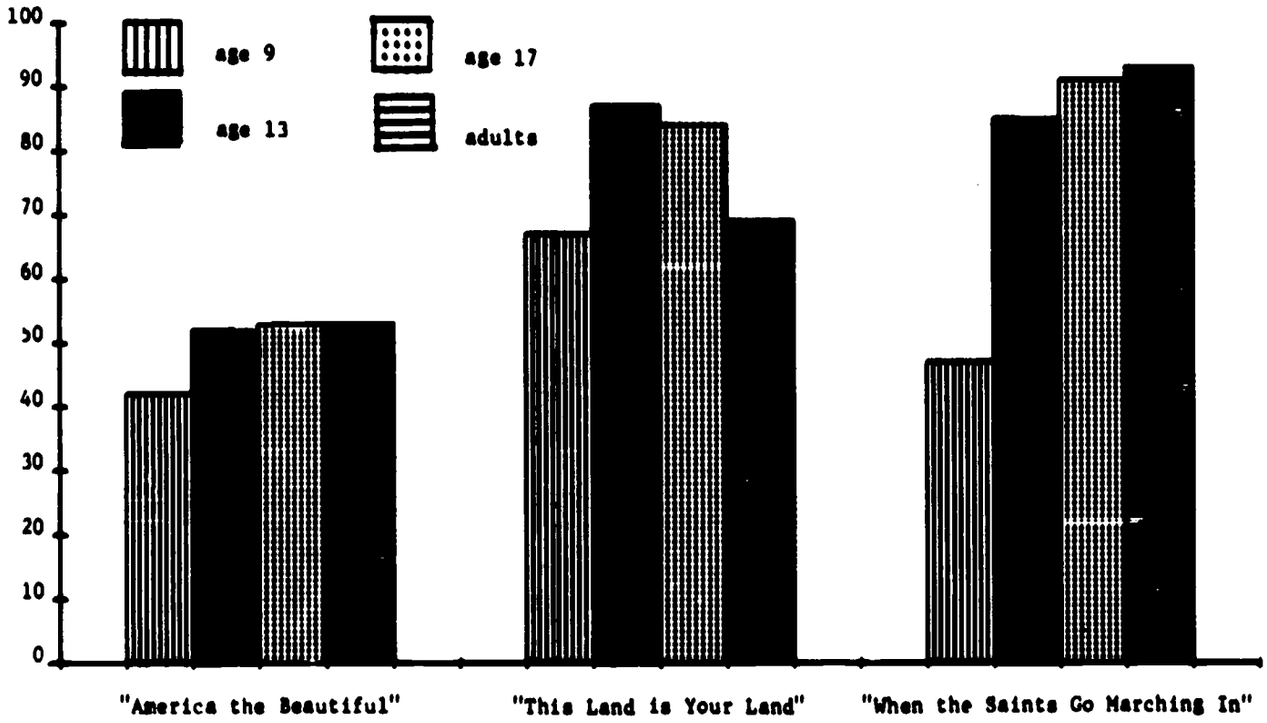


EXHIBIT 21. Percentages of Success for Exercises 4M and 4N, "Familiar Songs"



Chorus" from the *Messiah* and the "March" from the *Nutcracker Suite*. Most of these selections were identified by less than 25% of the individuals from all four age levels, and some were much lower (Exhibit 22).

EXHIBIT 22. Percentages of Success for Exercise 40, "Familiar Classics"

	Age Level		
	13	17	Adult
Symphony No. 5, Beethoven	19.8%	29.5%	15.6%
Grand Canyon Suite, Grofe	3.1	4.2	14.5
"Hallelujah Chorus," Handel	4.8	17.7	38.6
Nutcracker Suite, Tschaikovsky	24.2	24.9	23.3

Although many did not recognize the familiar classical selections, many individuals were able to match composers with their most famous compositions (Exhibit 23). About 35% of the adults recognized that Handel composed the *Messiah;* about 30%, that Tschaikovsky composed the *Nutcracker Suite*. Over 50% were able to match Sousa with the march, "Stars and Stripes Forever."

EXHIBIT 23. Percentages of Success for Exercise 4P, "Match Composer and Work"

	Age Level		
	13	17	Adult
Aida, Verdi	4.8%	6.4%	14.7%
The Blue Danube, Strauss	8.6	18.8	30.1
"Toreador's Song," Bizet	9.9	6.0	9.6
Grand Canyon Suite, Grofe	8.9	5.3	8.6
Messiah, Handel	12.0	23.3	34.9
New World Symphony, Dvorak	5.6	4.5	8.7
Nutcracker Suite, Tschaikovsky	20.7	33.7	29.0
Peer Gynt Suite, Grieg	6.5	6.4	9.2
Peter and the Wolf, Prokofiev	3.6	3.9	6.3
The Rite of Spring, Stravinsky	4.4	4.7	7.9
"Stars and Stripes Forever," Sousa	26.3	44.7	52.5
Unfinished Symphony, Schubert	9.7	13.1	13.9
William Tell Overture, Rossini	5.5	3.8	4.6

Musical History and Literature

The history and literature exercises show an interesting pattern of knowledge and aural discrimination. While many individuals were not familiar with labels for the five major style periods, many were capable of making relatively subtle discriminations between the styles of several pieces. Familiarity with style labels appears not to be as developed as the ability to discriminate between styles.

On the other hand, more individuals were familiar with the titles and composers of certain pieces than were able to recognize the same pieces aurally.

Percentages of success in the history and literature exercises tended to be lower than percentages in the topics discussed in other chapters. Do these lower percentages reflect more difficult exercises in this area? Or do Americans know less about history and literature than the other aspects of music? Is it important that more people be familiar with the history of music? Does the music curriculum need revision in this area? National Assessment cannot answer such questions, but hopes to provide information that helps the reader formulate informed answers.

CHAPTER 6

ATTITUDES TOWARD MUSIC

Since many professionals feel that music education takes place largely in the affective domain, the results for the attitude exercises should be of paramount importance. Ideally, these exercises should have measured such matters as awareness of musical resources, willingness to be exposed to new musical stimuli, willingness to respond aesthetically, deriving satisfaction from responding to music, valuing music and making a commitment to music. In fact, because of the extreme difficulty of constructing valid exercises and scoring procedures in the affective domain, we have found it impossible to measure most of these traits directly.

This difficulty is a result of the fact that internal responses and feelings cannot be measured directly, but can only be inferred from overt actions. Attitudes and interests can easily be faked or exaggerated, especially because we lack technically adequate instruments for measuring many aspects of attitude. In reviewing the results of the exercises in this chapter, one must constantly be aware that people were reporting on their own activities and that there is no way that we can confirm what they have reported.

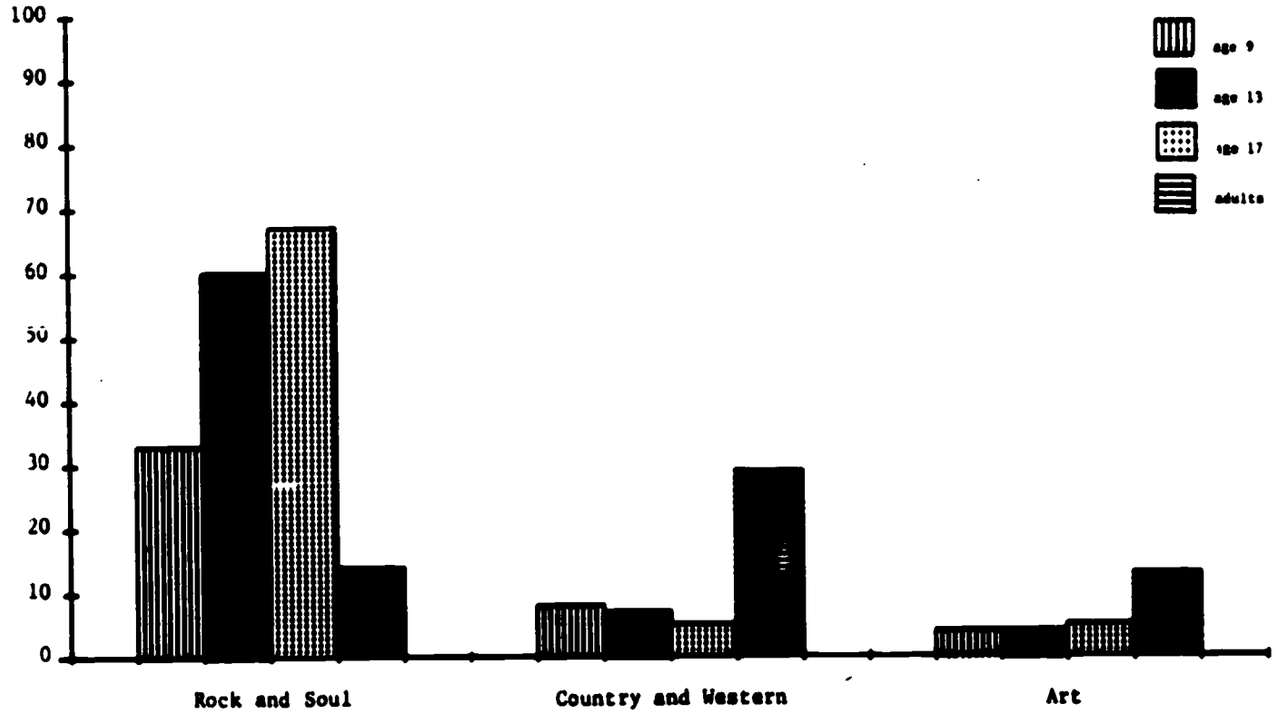
The initial work of National Assessment in this field represents a valuable pioneering effort. The affective exercises do reveal significant information about the extent to which young people are aware of and utilize musical resources available to them, belong to musical organizations and enjoy singing or playing instruments.

Many of the exercises that measure an individual's interest in and attitudes toward music have several parts. In this chapter, we will juxtapose related parts from different exercises to discuss three basic issues. The first is whether people like to listen to music, what types of music they like to listen to and what communications media they turn to. Then we will discuss attitudes toward singing: Do people like to sing? Alone or with others? In large groups or small? What kinds of songs do they like to sing? Finally, we will discuss those attitudes that involve playing an instrument: Do people play? If not, would they like to? Do people prefer playing alone or with others? What kinds of music are generally preferred?

Exercise 5E begins with a straightforward question, "Are there any kinds of music that you like to listen to?" Over 95% of the individuals from the upper three age levels indicated that yes, there were kinds of music that they enjoyed. Predictably, most listed popular music as the type they liked best, rock and country and western being the most often listed popular forms. But

13% of the adults named symphonic, operatic or some form of art music as the type they liked best (Exhibit 24).

EXHIBIT 24. Exercise 5E, Types of Music Individuals Most Like to Listen to. (Other categories, reported in the statistical report, have smaller percentages.)



We also asked individuals how they went about listening to the music of their choice. Over 90% of the individuals from the upper three age levels reported actively seeking out and listening to music programs on the radio at least once a week, while about 80% of the 9-year-olds reported doing so (Exhibit 26). On the other hand, 9-year-olds reported seeking out and listening to musical programs on the television more commonly than did those from the upper age groups (Exhibit 25). Except for 17-year-olds, most individuals reported that they did not turn to records and tapes as often as to television and radio to hear musical programs (Exhibit 27).

Needless to say, individuals attend live musical programs outside of the school less often than they listen to recorded programs. Only about 25% of the 13-year-olds and 17-year-olds and about 15% of the adults reported attending a live program at least once a month (Exhibit 28).

EXHIBIT 25. Individuals Who Reported Seeking Out and Listening to a Musical Program on Television at Least Once a Week (Exercise 5A)

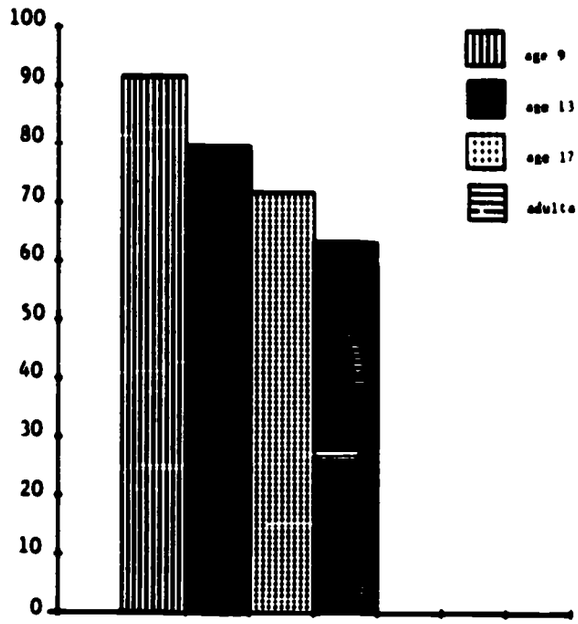


EXHIBIT 26. Individuals Who Reported Seeking Out and Listening to a Musical Program on Radio at Least Once a Week (Exercise 5A)

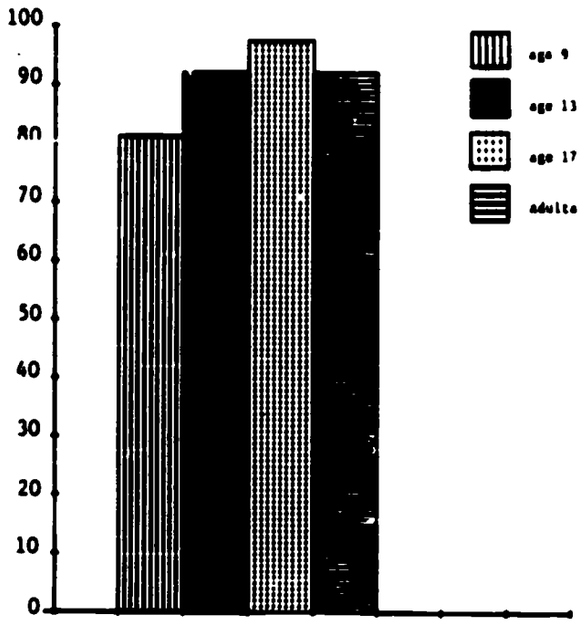


EXHIBIT 27. Individuals Who Reported Listening to Records or Tapes at Least Once a Week (Exercise 5A)

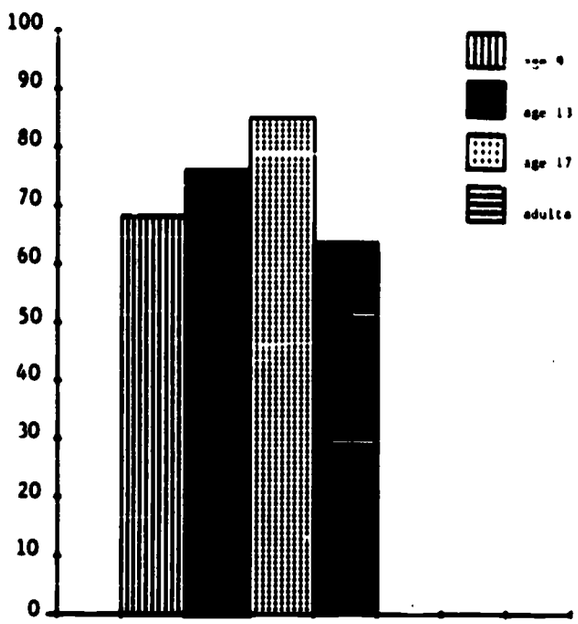
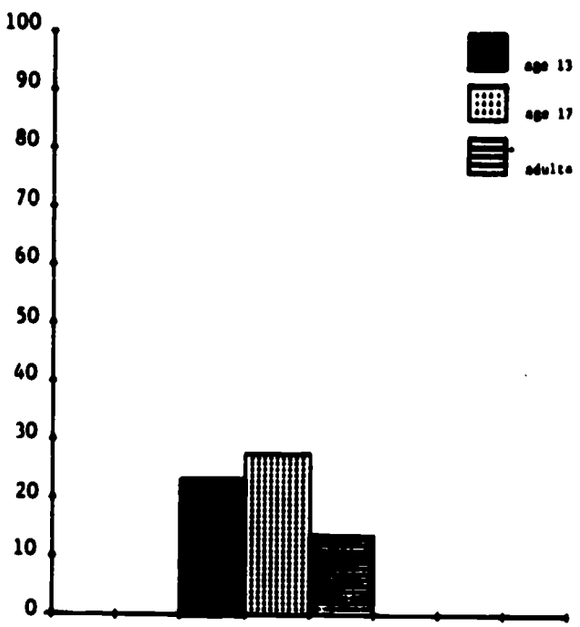


EXHIBIT 28. Individuals Who Reported Attending a Live Musical Program Outside of School at Least Once a Month (Exercise 5D)



In Exercise 5F, we examined attitudes toward singing. In the upper three age levels, about 25% of the individuals reported that they enjoyed singing very much, and another 50% reported that they enjoyed singing at least somewhat (Exhibit 29). Forty percent of the 9-year-olds reported that they like singing very much. Individuals from all age groups generally reported that they preferred singing with others to singing alone, but many enjoyed singing either alone or with others. About 20 or 25% of the 9, 13 and 17-year-olds reported actually belonging to a singing group, and 5% of the adults reported belonging to such a group (Exhibit 30). Generally, individuals reported singing the same kinds of music they like to listen to: Rock music is the most popular for the younger ages, while country and western, art, and religious music are also popular with adults. However, while few listed folk music as the type they enjoyed listening to, more listed it as the type they enjoyed singing.

EXHIBIT 29. Individuals Who Like to Sing (Exercise 5F)

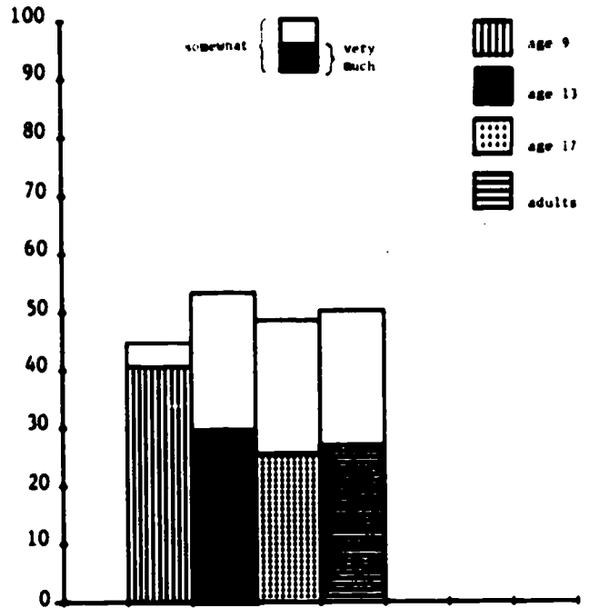
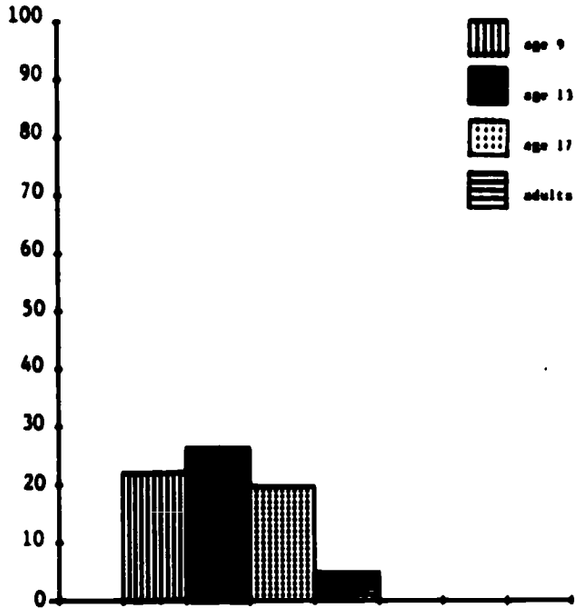


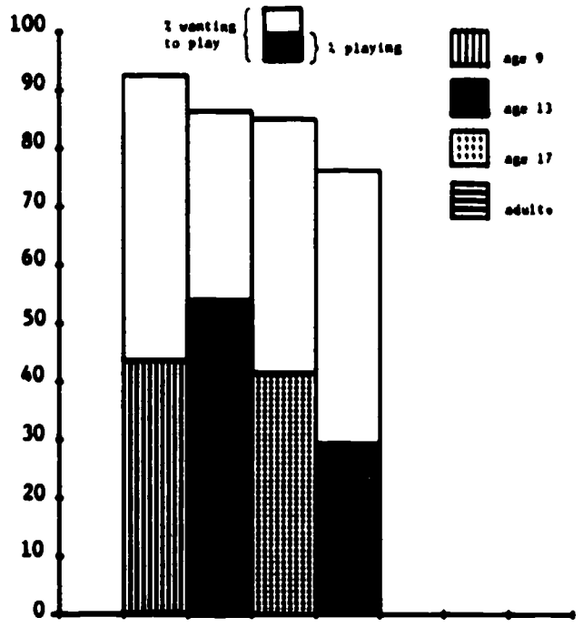
EXHIBIT 30. Individuals Who Reported Belonging to a Singing Group (Exercise 5I)



Exercise 5G began by asking individuals whether they played an instrument, and whether they would like to learn how to play a musical instrument. More individuals claimed to play an instrument in this exercise than did in Exercise 1L, where they were actually asked to play. About 45% of the 9-year-olds, 55% of the 13-year-olds, 40% of the 17-year-olds and 30% of the adults claimed to play an instrument of some type. An additional 40% of almost every group reported that they did not play an instrument, but would like to learn (Exhibit 31). Although most individuals preferred singing with a group, as many instrumentalists enjoyed playing alone as much as with others. Few instrumentalists actually reported that they belong to a performing group: about 10% of the 9, 13 and 17-year-olds, and only about 1% of the adults. As with listening and singing, most instrumentalists enjoy playing popular music, but some older respondents also enjoy playing art music.

All in all, many individuals expressed a strong interest in music. About 95% reported that they enjoyed listening to some types of music; about 80% reported that they enjoyed singing; about 80% reported that they play or would like to play an instrument. It does appear that many see music as an important aspect of their lives.

EXHIBIT 31. Individuals Who Play Instruments or Would Like to Learn to Play (Exercise 5G)



CHAPTER 7

GROUP DIFFERENCES

In addition to obtaining national percentages for the various exercises in the Music packages, National Assessment obtains results for individuals in various geographical regions, of different sexes, of different races, with differing amounts of parental education and from different types of communities. Complete information on group differences can be found only in the statistical report. In this chapter, we will discuss in very general terms how these various subpopulations perform compared to the nation as a whole on the Music exercises.

It is important to recognize, however, that membership in any of the groups we will discuss should not be assumed to be the cause of the group's level of performance. For example, if the results indicate that Blacks attain percentages significantly lower than those for the nation as a whole, skin color cannot be assumed to be the cause of the difference. It is well known that a disproportionately large number of Blacks live in communities with low socioeconomic status, and that members of such communities generally perform poorly on standardized tests. Many additional circumstances also correlate with Blackness in our culture: the level of parental education, parental involvement in education, health, access to good libraries and so on. The differences by color, as well as the differences by region, sex and community type, are real and should encourage change in our educational system; but it is important to recognize that neither color nor region, sex or community type can cause these differences.

From previous assessments, we have learned to expect certain differences in group performance. Girls generally do better than boys except in science. Whites tend to attain higher percentages of success than Blacks. There is even a typical regional pattern: The Northeast and Central regions tend to attain higher percentages than the West and Southeast.

Parental education and community type categories also exhibit typical patterns. Generally speaking, the greater the education of an individual's parents, the higher his or her scores. In terms of communities, three groups most often attain significant differences from the national level. Rural communities, where the majority of adults work on farms, and low metropolitan communities, where the majority of adults are on welfare, tend to attain percentages lower than the national level. High metropolitan communities, where the majority of adults are in professional or managerial positions, tend to attain percentages higher than the national level.

Groups generally performed as they have in previous assessments on those Music exercises that involved notation and terminology, instrumental and vocal

media, or music history and literature--that is, the Northeast and Central regions, Whites, females, the high metropolitan group and the highest parental education group performed above the national level, while the Southeast, males, Blacks, the rural and low metropolitan groups and the lowest parental education group performed below the national level.

However, group performance on the Music attitude and performance items did not follow the usual pattern. On those exercises all groups performed at about the same level, and sometimes the groups which are generally below the national performance level achieved results that were greater than the national results.

There are several ways of interpreting the results of the attitude exercises. One is to accept the results at face value, to theorize that membership in the various groups we have defined has little effect on one's attitude toward music. The other is to suppose that some groups have misrepresented their attitudes more than others.

Without denying the possibility that an individual can misrepresent his attitudes, let us for the moment take the attitude exercises at face value. If we do so, we find that the ability to sing, to play instruments, to enjoy an active or passive participation in musical experience--these are not dependent on group membership. The more cognitively-oriented exercises, those which more closely follow the content and format of the traditional classroom, are the ones that show divergence among the groups.

But the specifics of group performance are far beyond the scope of this report. The statistical report contains group differences for each exercise and for various groups of exercises. A study of this more complete data can prove to be well worth the effort.

CHAPTER 8

CONCLUSION

The Music assessment included different exercises, many of them with several parts and almost all of them administered at several age levels. Because the statistical analysis for each exercise sometimes requires up to 100 pages of computer output, it is sometimes difficult to determine what it all means. In this chapter, we will attempt to formulate some generalizations, however tentative, to describe the overall results of the assessment.

EXHIBIT 32. Median Percentages for Overlap Exercises by Age

	Age Level			
	9	13	17	Adult
Performance exercises (13 values)	31%	48%	45%	54%
Notation and terminology exercises (45 values)		43	47	38
Instrumental and vocal media exercises (42 values)		84	89	82
History and literature exercises (78 values)		20	24	30
Attitude questions (16 values)		62	62	56

Medians are measures of central tendency for a particular age level on a specific group of exercises. For example, the median percentage of 31 for 9-year-olds on the performance exercises indicates that these children attain percentages of success greater than 31 on half of the overlap performance exercises and less than 31 on the other half of the overlap performance exercises.

The medians are not of all the exercises given to a particular age level, but of the set of exercises which were also administered at other age levels. For the performance items we included overlaps at all four ages, but for the

other groups, we included overlaps for only the upper three age levels since 9-year-olds frequently had completely different exercises.

Medians are most useful not as single, absolute numbers, but in comparison with other medians. If we compare medians within a column, we can see, for example, whether 13-year-olds tend to achieve higher percentages on performance exercises or on notation and terminology exercises. If we compare medians within a row, we can determine, for example, whether 9-year-olds or 13-year-olds tend to do better on the performance exercises. Each comparison is valuable, but the first requires some caution. In reading the numbers vertically, we must remain aware that the exercise groups differ not only in content, but also in difficulty. For example, the median percentage for 9-year-olds on the notation/terminology exercises was 38; on the media exercises, 74. This difference might indicate that 9-year-olds know more about instrumental and vocal media than about notation and terminology; it might indicate that the notation/terminology exercises were more difficult than the media exercises; or it might result from a combination of these factors. Only if one is willing to assume the comparable difficulty of the two groups of exercises can he theorize that 9-year-olds are more familiar with media than with notation and terminology. A further difficulty with vertical comparison is represented by the attitude questions. Although the cognition-oriented exercises have correct and incorrect responses, there are no correct attitudes. Instead, the median percentages here reflect the attitudes that have been judged most desirable.

As many difficulties as there might be, it does seem possible to make some overall generalizations. Individuals from all age levels tend to attain the highest percentages on those exercises that involve media and attitude. On the average, about 90% of the 17-year-olds are able to answer questions that involve recognizing and identifying the various instrumental and vocal media; younger children find the exercises a little more difficult, and there is some decline at the adult level. Over half of the individuals from all the upper three age levels tended to express positive values toward music, although adults do show a slight decline in interest toward music.

For adults, the group of exercises with the next highest median is the performance group. The adult median percentage of 50 is especially noteworthy because adults so often attain percentages lower than the 17-year-old level in assessment exercises.

For adults, the median percentage in the notation/terminology exercises was lower than the median percentage for the performance exercises. Seventeen-year-olds, it appears, tend to respond at about the same level as do 13-year-olds, while adults show a marked decrease in the median percentage.

The history and literature exercises appear to be the most difficult for the upper three age levels. Although the percentages of success on the history and literature exercises were much lower than for other groups of exercises, it is encouraging to note that the median does increase with age, even at the adult level.

Perhaps at this point we can allow ourselves a bit more freedom to generalize. Considering the difficulty of the performance items, percentages seem quite high and do improve with age. Few individuals demonstrated knowledge of musical notation and terminology, and there is a marked decrease at the adult level. Many individuals at all age levels demonstrated a knowledge of the names of musical instruments. Very few individuals are familiar with the history or literature of music, but there is some improvement up to the adult level. Individuals at all age levels express a strong interest in and positive attitude toward music, but this interest does seem to decline somewhat at the adult level.

If there is a pattern emerging from all this, it is that people are involved at the simplest levels with the activity of music. They can sing, and they like to sing; performance abilities tend to increase even after formal education ends. They hear enough music to recognize the instruments, and they like to listen to music. Only the specialized vocabularies that have been constructed to describe music are lacking from the musical background of most people.

This summary of results for the first Music assessment should be only one step in a more important process. This report has highlighted some of what National Assessment has uncovered about the musical abilities of Americans at various ages. But more important questions have to be faced. Do the results show an area in which most people are deficient? Is it important that music educators try to make up for this deficiency in future generations? Are we generally satisfied with the level of musical achievement for most individuals? Is there evidence that this level of achievement is largely due to the classroom or is it the result of the larger environment in which we all live? Is there evidence that music educators have concentrated too much on some areas at the expense of others? This report provides no answers for what music education should be, but it does provide data that can be valuable in any discussion of that question.