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ABSTRACT

To develop an understanding of major 20th century musical styles and compositional techniques in junior high school general music classes, and to utilize rather than ignore student interest in current music, a sequence for units-of-study was developed and tested over a 2-year period in urban junior high schools. The initial units dealt with what teenagers know musically--rock, pop, soul, electronic music, and jazz. A unit on African and non-Western music followed; the concluding units dealt with early 20th century styles such as Impressionism, Expressionism, Barbarism, Transcendentalism, and Dadaism. The result of the study was an overview and guide for teachers of general music. (Included in the report are background materials and methods used for the study; research findings; a discussion of recent emphases in music education; sample objectives, tests, and activities; and a list of references.) [Not available in hard copy due to marginal legibility of original document.] (MF)

FINAL REPORT
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DEVELOPING UNDERSTANDING OF TWENTIETH CENTURY COMPOSITION IN JUNIOR HIGH SCHOOL GENERAL MUSIC

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It was while taking a course in Contemporary Music with Dr. Robert Pace, now the Chairman of the Music Department at Teachers College, Columbia University, that the idea for studying perceptions of twentieth century music was born. But without the help of Dr. Gladys Tipton, well-known music educator and creator of Adventures in Music, the design of this study would have been totally different; it would not have included the preparation of educational materials--so badly needed in the area of twentieth century music, and needed specifically for junior high school.

Dr. Frank D'Andrea gave many hours of his time to discuss the implications of this project; he brought the Cooperative Research Act to the writer's attention. The funding would never have been obtained without the help of Miss Ida Neuman and Miss Joyce Adler, who helped shape ideas into words and proof-read the original grant application. Mrs. Arlene Rochlin was also instrumental in helping to mold a readable project proposal.

Approaches to studying twentieth century music, and help in selecting the appropriate references, were acquired while taking courses in Contemporary Music with Dr. Craig Timberlake and Dr. Jack Bacher, and a course in musicianship with Dr. Donato Fornuto. Other valuable ideas were gained through attendance at the Eastman Seminar in Comprehensive Musicianship sponsored by The Contemporary Music Project which was conducted during June 1969.

Finally, thanks is extended to Neil Kirin, former associate editor of the H. W. Wilson Company, who worked so hard at proof-reading this final report. The arduous task of living with me through this time must be recognized, and no one worked harder than my wife, Muriel, in typing and retyping page after page of rough drafts.

M.A.
February 1, 1970

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I - INTRODUCTION

Summary

The problem investigated was how to develop understanding of major twentieth century musical styles and compositional techniques in junior high school general music classes. Aspects of this problem included: (1) how to use student interest in contemporary popular music as an apperceptive base--as a stepping stone to learning about the major musical styles of our century, and (2) how to arrange the sequence for units-of-study on these styles.

Action research was conducted in urban junior high schools over a two-year period. The researcher observed student interest in and knowledge about twentieth century music. Significant findings were used in planning the sequence for units-of-study. To create the units, additional procedures involved: (a) consulting and synthesizing literature on twentieth century music and recent trends in music education, (b) developing criteria for selecting musical compositions, (c) selecting repertory, (d) developing teaching strategies, and (e) planning classroom evaluation materials.

Teenagers were found capable of describing and analyzing the music of their own time. They could give descriptions of the styles known as rock, soul, and pop. Many students were able to describe East Indian instruments and ways of playing. Others provided detail about such jazz styles as ragtime and the blues. Some students had read extensively on computer music and synthesizers.

Aside from popular music--namely rock and soul--students were most responsive to electronic music and compositions which reflect the influence of electronic music; many were quite receptive to non-Western rhythms and musical concepts. Among their repertory of favorite songs were those which employed changing and irregular meters.

Seventh-graders enjoyed engaging in "definitions" of major twentieth century styles and compositional techniques, about which they had little or no knowledge. This served as an excellent prelude to a more serious study of these styles and techniques. Similarly, interest in progressive-rock could be used as a prelude to learning about electronic music; interest in soul could be used as a prelude to learning about gospel singing.

The sequence decided upon, for the units-of-study, was as follows: The initial units dealt with what teenagers know musically, rock, pop, soul, electronic music and jazz. A unit on African and non-Western music followed. The next series of units dealt with early twentieth century styles such as Impressionism, Expressionism, Barbarism, Transcendentalism, and Dadaism--styles more removed from teenagers' perceptive backgrounds. Nevertheless, the suggested approach was the same: to draw upon student experiences with compositions that reflect the influence of these styles. (For example, a recent album by the popular instrumental ensemble Blood, Sweat & Tears contains a version of Erik Satie's Gymnopédies. This is an excellent point of departure for studying Impressionism.)

Suggestions were made for eliciting student descriptions of the musical elements contained in their favorite recordings, and then motivating students to inquire about the backgrounds of favorite "tunes," "beats," or "sounds." Pupil interest in harmonies or orchestrations could lead them to investigate music of the past in which a particular work is rooted, or with which it shares a common bond.

The study resulted in an overview and guide for teachers of general music. The guide, containing units on twentieth century music, included objectives, pretests, analyses, materials, and strategies for developing conceptual understanding of modern musical compositions. Additional evaluation materials were included. The study sought to improve instructional practice by demonstrating the value of commencement with the present, and of employing rather than disregarding student interest in current music.

Background for the Study

Modern composers, such as Copland, had often expressed concern for the limited emphasis given to twentieth century music in the concert halls and in our schools.[1] From time to time books had appeared which acknowledged the need, and contributed ideas for teaching twentieth century music and musical concepts.[2] Federal funds, however, made possible the Yale Seminar, which emphasized the need for broadening the school music repertory to include more twentieth century and non-Western compositions; it also precipitated a more widespread concern for this issue among music educators.[3]

The Yale Seminar included contemporary composers as well as music educators; they suggested an increased presence of composers in the schools. Soon the Contemporary Music project was formed; it consolidated programs, already in existence since 1959, to place composers-in-residence in school situations. Ford Foundation funds and affiliation with the Music Educators National Conference facilitated the creation of important pilot projects.[4]

The pilot projects resulted in three valuable documents: the first included discussion of the need to equip future teachers with skills necessary for effectively dealing with twentieth century music; the second described

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[1]Aaron Copland, Copland on Music (New York: Doubleday and Company, 1960), pp.42, 43, 67-69.

[2]Hans Tischler, The Perceptive Music Listener (Englewood Cliffs: Prentice Hall, 1955), pp.21-22, 56, 276, 306, 335; Grosvenor Cooper, Learning to Listen--A Handbook of Music (The University of Chicago Press, 1957); Archie N.Jones, ed., Music Education in Action (Boston: Allyn and Bacon Inc., 1960), pp.120, 127-30, 342-45.

[3]Claude V. Palisca, ed., Music in Our Schools--A Search for Improvement (Washington: U.S. Department of Health, Education and Welfare, OE-33033, 1964, No.28).

[4]The San Diego, Baltimore, Fairmondale, Arlington, and Bennington pilot projects.

receptivity encountered when exposing children to modern music, and other results of experiments; the third contained references to new compositions written especially for the schools.[1]

One pilot project, in San Diego, included a seminar for its teachers. As a participant in the seminar, Archibeque acquired concern for the limited emphasis given to contemporary music in most elementary and junior high schools. She conducted a study, and in her report called it imperative that music educators turn to modern music for new methods and materials.[2]

Archibeque found that students in the seventh grade seemed to prefer contemporary music to that of earlier periods. This finding supports the argument that there is no reason why we should not use positive responses to our advantage and commence instruction in seventh grade music classes with contemporary music. Yet Archibeque's conclusions were based on a two-part questionnaire for which the reliability and validity were unknown; and only six compositions in all were played for the pilot and control groups. Perhaps Archibeque should not have emphasized statistical inference in her report, and greater emphasis should have been placed on the nature of student understandings and perceptions.

Archibeque stated that she had designed nine questions to determine student understanding of form, rhythm, melody, harmony, and mood; but she did not present nor discuss them in her report. Moreover, the questions were said to be appropriate for the level of seventh-grade students and designed to promote understanding of and appreciation for contemporary music. The availability of such questions, through presentation and detailed discussion, could be a valuable contribution to the field of

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[1]The Contemporary Music Project for Creativity in Music Education, Comprehensive Musicianship; Experiments in Musical Creativity; and Contemporary Music for Schools (Washington: Music Educators National Conference, 1965 and 1966).

[2]Cherlene Paullin Archibeque, "Developing a Taste for Contemporary Music," Journal of Research in Music Education, XIV, 2 (1966), 142-47.

music education. They might be of interest to other junior high school teachers, who could use them for action research in their own classrooms. Thus other teachers could test the questions' ability to promote understanding of and appreciation for contemporary music.

Greater detail on the San Diego pilot project and the accompanying seminar for teachers--of which Archibeque was a member--is available in Experiments in Musical Creativity; there is both an overview of twentieth century trends and compositional techniques, and accompanying lists of compositions employing them. But often it is not sufficiently correct; the first important use of rhythm as a structural element may have been in Bartok's Allegro Barbaro rather than in Stravinsky's Le Sacre du Printemps.[1] It is not sufficently current; in the last three years there have been many good "rock" compositions that do employ unusual and changing meter,[2] and which could be at least temporary additions to the general music listening repertory. And finally, it is not detailed enough for a teacher who is insufficiently trained in twentieth century music, or who did not participate in a seminar such as the one in San Diego. There are not enough examples of classroom pretests or examinations, although the Baltimore Project's Seminar provided "guidelines for evaluation,"[3] and all the project reports related informal, anecdotal, evaluative statements by teachers.

There is additional need for more detailed materials and techniques, for keyboard experiences, for work with easy-to-play classroom instruments, and for work with difficult children.

The San Diego Project Report described a junior high school class-in the pilot project--as "with a below average socio-economic level."[4] Although it was said that "approaches need to be adapted to the background of the group," no special techniques were described. There is need for an approach that is particularly appropriate for urban schools as well as the junior high school age group in general. There is a need to study actual student perceptions of twentieth century music in different schools. There is a wide range of differing attitudes among children which sample lesson plans must take into account.

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[1]The Contemporary Music Project, Op. Cit., p. 32.

[2]Ibid., p.33. [3]Ibid., p. 19. [4]Ibid., p. 44.

The Hornyak Study was a comprehensive investigation of student attitudes toward contemporary American music; but perhaps it shares a common fault with Archibeque's study. In attempting to obtain statistical inference, other more valuable tasks may have been overlooked. Two such tasks are the preparation of educational materials and the careful examination of twentieth century musical concepts.[1]

In the Hornyak study, several possibly erroneous concepts were perpetuated or left unscrutinized. In one such instance it was concluded that confusion existed in the minds of some students as to the difference between disjunct melodic lines and conjunct melodic lines with a dissonant harmonic texture. Disjunct melodic lines can exist within simple triadic harmony. What is the precise meaning of "harmonic texture"? Was homophonic texture meant? No provision was made for changing concepts of dissonance.

This confusion of dissonance, harmony, and texture seems to indicate the problem of inadequate and insufficient teaching materials dealing with twentieth century musical concepts. Student confusion among musical concepts may be attributed to the terminology within the questionnaires that were used in Hornyak's investigation. Perhaps the study should not have relied so heavily on Kate Hevner's test items, which can stand revision and updating.

Additional criticism of the Archibeque and Hornyak studies can be obtained by drawing upon the thinking of Bennett Reimer. He seriously questioned the validity and usefulness of studies of musical tastes, preferences, or relationships among attitudes, preferences, and varying mental abilities.[2]

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[1]Robert Hornyak, An Analysis of Student Attitudes Toward Contemporary American Music (Washington D.C.: U.S. Office of Education, Final Report BR r-8288 A, Ed. 010-413; Summary Report BR 5-8288 B, Ed. 010-414).

[2]Bennett Reimer, "Effects of Music Education: Implications From a Review of Research," Perspectives in Music Education, Source Book III, Bonnie C. Kowell, ed. (Washington D.C.: Music Educators National Conference, 1966), 487.

To the knowledge of the researcher there has been no overview and sequential plan, specifically for junior high school, aimed at developing understanding of twentieth century compositions representing the major compositional techniques and trends of the century by proceeding from the known to the unknown.[1] There are numerous dissertations on extremely delimited aspects of modern music.[2] Jones[3] prepared a glossary and coston[4] developed a sourcebook for college teachers. Sessions[5] dealt with elementary school. Jarrett[6] limited his project to junior high school but studied the development of musicality rather than the understanding of specific compositions and trends. Marsh[7] focused on understanding music through the use of contemporary music rather than the understanding of contemporary music itself. Alper's report[8] concentrated on the musically talented child rather than on a general music situation. Glenn's project[9] was in the area of high school and was not limited to twentieth century music

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[1]Searches were conducted by "Datrix" (Xerox division of University Microfilm) and the Phi Delta Kappa Research Service Center.

[2]Helen Hewitt, "Supplement to Doctoral Dissertations in Musicology," Journal of the American Musicological Society, XX-3 (Fall 1967), pp.460-63.

[3]Robert Carroll Jones, A Glossary of Theoretical Terms Used in Selected Writings in English About Twentieth Century Music, University of Iowa, 1965.

[4]Evelyn Coston, Listening to Modern Music: A Sourcebook for the College Teacher, Columbia University, 1964.

[5]Roger Sessions, An Enlarged Music Repertory for Kindergarten Through Grade Six (U.S.Office of Education, July 1964 -- December 1966).

[6]James L. Jarrett, A Study of the Development of Musicality in the Junior High School and the Contribution of Musical Composition to this Development (U.S.Office of Education, July 1965 -- June 1967).

[7]Mary Val Marsh, Developing Musical Understanding Through Contemporary Music (Mimeo, A Report to the Contemporary Music Project, 1964).

[8]Herbert Alper, To Demonstrate A Type of Teaching That Will Stimulate the Creative Process in Musically Talented Children (Mimeo, A Report on the Farmingdale Project, 1964).

[9]Neal E. Glenn, The Development of Content and Materials for a Music Literature Course in the Senior High School (U.S. Office of Education, July 1965 -- August 1966).

The Present Study

This study recognizes the need to deal with a variety of twentieth century compositions in junior high school general music classes, and agrees that lack of emphasis on twentieth century music as well as insufficient teacher knowledge of it is a serious problem.

Traditionally, teachers have disregarded student interest in current music. Instead, this intrinsic motivation should be used as a stepping stone to the past. A class should proceed toward the goal of understanding twentieth century musical trends and compositions by first listening to, describing, and analyzing the current music that has emerged from those trends. In junior high school, a chronological approach is inappropriate and problematical.

These problems may be reconciled by creation of methods and materials that applies the principle of "from the known to the unknown," and by creation of a guide containing analyses and teaching strategies for selected representative twentieth century compositions.

Disregard for student interest in current music seems inconsistent with the writings of noted educational philosophers. Rousseau was concerned with a child-centered school. Pestolozzi saw education in terms of student needs and the "doctrine of interest." Froebel emphasized respect for the child's individuality. Dewey favored the attainment of ends which had a direct vital appeal to the learner, and emphasis on the present rather than the future life. Kilpatrick saw pupil purposes as the key to pupil learning. Gores, with the recent respect for the world of the child, maintained that "everybody must learn from everybody."[1]

The following argument seems consistent with Bruner's philosophy. There is evidence that music of the Beatles,

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[1]Robert W. Richey, An Introduction to Education (New York: McGraw-Hill, 1968); Harold B. Gores, "The Big Change" (An address delivered to the New York State School Boards Association, December 1962).

Burt Bacharach, Jim Webb, Andre Previn, and others, is of good quality--as well as being part of the teenagers' "immediately present reality."[1] Use of Beatle and other such compositions may have value in teaching the structure of music, or in developing motivation to study musical concepts; to help teach the structure of the subject they should be analyzed and presented to students.

The purposes of this study are as follows: first, to contribute to the expansion of the junior high school music curriculum and its repertory of twentieth century compositions (in this respect it resembles the San Diego Project's purpose of locating contemporary music suitable for teaching children with varying spans of attention and developing approaches for presenting these materials in typical classroom situations);[2] second, to examine teenage perception of contemporary music, and then using this perception as the basis for sequential units-of-study on major twentieth century styles and compositional techniques.

Another purpose of this study is to examine recent emphases in music education. The problem of how to teach twentieth century music cannot be divorced totally from the problem of how to teach any kind of music in the classroom. Do you stress performance? Do you stress listening? Do you teach skills? Or do you develop understandings?

The researcher had pondered other questions before embarking upon this study: (1) What are the advantages of "exploration and discovery?" (2) How does one use the "discovery method?" (3) Does a child learn a concept all at once, suddenly getting the gestalt, or does he learn concepts through various experiences which may or may not include discussion?

These issues are common to all music teaching. Music educators since Mursell have dealt with them, and with the question, what are the aims of music education and how should music be taught? Such issues are a backdrop, against which the more specific problems of teaching twentieth century music in junior high school general music classes must be viewed.

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[1]Jerome S. Bruner, The Process of Education (Cambridge: Harvard University Press, 1960), p.37.

[2]Experiments in Musical Creativity, Op. Cit., p.30.

Methods

The procedures of this study involved consultation of literature on twentieth century music and on music education, action research in junior high schools, the development of criteria for selecting musical compositions, the selection and analysis of these compositions, the creation of teaching strategies, and the formulation of evaluative devices.

Among the books and articles consulted were those dealing with (1) twentieth century musical trends and compositional techniques, and (2) recent emphases in music education such as "conceptual learning"[1] and "perceptive listening."[2]

From the literature consulted, descriptions of major twentieth century musical trends and compositional techniques were synthesized, which were felt to be appropriate for use with junior high school students. Action research with students was also helpful in preparing these descriptions, and in preparing definitions.

Criteria were developed for selecting twentieth century compositions, as follows:

(1) representation of major twentieth century styles such as Expressionism, Barbarism, Impressionism, Neoclassicism, and jazz,

(2) representation of major twentieth century compositional techniques such as twelve-tone or aleatoric techniques,

(3) representation of major twentieth century new media such as tape, amplified instruments, and synthesizers,

(4) representation of contemporary use of such non-Western instruments as the sitar,

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[1]Charles L. Gary, ed., Music in the Elementary School--A Conceptual Approach (Washington D.C.: Music Educators National Conference, 1967): [2]Howard Brofsky and Jeanne Shapiro Bamberger, The Art of Listening: Developing Musical Perception (New York: Harper and Row, 1969).

(5) representation of a variety of forms, modes, instrumentation, and rhythmic conception,

(6) appropriateness for use in junior high school general music classes with reference to length, complexity, variety of mood, and variety of subject matter,

(7) availability of recordings or tapes,

Compositions were then selected according to the above criteria and analyzed as to their content. Particular emphasis was placed upon those aspects of their content that reflected the uniqueness of twentieth century music. For example, such factors as changing meters, neomodality, and parallel harmonic motion were given particular attention.

Materials and teaching strategies for the junior high school general music teacher were developed in the areas of listening, singing, and notating. Keyboard experiences and work with classroom instruments were also suggested. Wherever possible, teaching strategies were related to specific compositions, and an attempt was made to draw upon the perceptive background of teenagers.

Classroom evaluative materials were developed such as objectives and pretests. Some sample essay, matching, short-answer, multiple-choice, and fill-in questions were prepared; not for all the units-of-study however.

The final procedures involved the assembly of all the teaching and evaluating materials into an overview and guide for teachers in general music classrooms. The guide contained units-of-study on major twentieth century musical styles, trends, and compositional techniques. Each unit usually contained objectives, a pretest, discussion of the particular styles or compositional techniques, a sample analysis, and suggested activities for developing understanding of the style or technique.

A forward was prepared to accompany the guide, that contained the suggested approach of harnessing students' natural interest in the music of our time, and contained additional discussion of preparing objectives for junior high school general music classes.

Some additional explanation of the action research conducted is necessary. It was not a statistical study. In the main, there were no control groups or experimental groups, no questionaires. The procedures used primarily were observation, and collection of data from student discussions and reports.

The researcher worked in five different New York City junior high schools and intermediate schools, over a two-year period. One of the schools was in a "ghetto" area. Approximately two-thousand students in all were worked with at various different times, including white, black, and Puerto Rican students.

The intelligence levels of the students were varied. The classes--as frequently categorized by the exponent designating the class, such as $7sp^1$ or 7^{12}--included bright, average, and dull youngsters.

Details on some minor aspects of procedure--such as specific classwork with twentieth century music and musical concepts, including keyboard experiences--will be discussed under Findings; such details will be more meaningful when immediately followed by data.

II - FINDINGS

There were two types of findings in this study. The first resulted from action research into teenage perception of twentieth century music, and constitutes the original data. The second type of finding resulted from examining literature on twentieth century music and music eduation.

Teenage Perception of Twentieth Century Music

Working with urban junior high students over a two year period, data were collected from student discussions and reports. The discussions and reports were in response to the question "How does twentieth century music differ from the music of previous eras?" No attempt was made to rigorously select or match students. Rather, as many different students as possible were questioned in order to obtain data that were felt to be significant.

Significant findings fell into five main areas: (1) amplified, electronic, and computer music, (2) Indian music, (3) African and other non-Western music, (4) rock, rock'n' roll, and soul, and (5) jazz.

Amplified, Electronic, and Computer Music

When asked about ways in which twentieth century music differs from that of previous eras, many students cited amplification, electronics, or tape. One of the more outstanding essays submitted was by a ninth-grade youngster in a Harlem junior high school. It was entitled "The Difference Between Psychedelic, Computer, and Amplified Music." Despite obvious grammatical errors, the essay provided valuable insight into how some students perceive contemporary music.

The "sound of today," for example, was described as "easily distinguished by being similar in a way the music is made from mostly electric power." Within an elaborate discussion, psychedelic music was characterized as "being more than just amplified," "capable of being the loudest sounds you ever heard," and "music in which the beat is

constantly changing from slow to flowing, to moderate, to fast." Computer music was in part described as not made by any instrument; having its own melody, harmony, and rhythm; having its own effects like echos or vibrations overlapping the sound; and what the "today" sound will be in the twenty-first century.

Indian Music

Many students discussed Indian music as a recent influence upon rock and pop (see Table 1). The students meant the music of India, and did not confuse it with American Indian music, as students used to. In their discussions, students were able to identify the sitar, the dilruba, the tabla, and other Indian instruments. Details about the sitar, the students related, were available to them on record jackets and in their favorite magazines. They described the sitar's shape, tonal quality, and number of strings; they discussed the difficulty for some Westerners to appreciate it because of it sounding off-key or off-pitch to them. Some students knew what a raga was; others described the influence of such Indian musicians as Ravi Shankar and Alla Rakha.

Table 1. Singing Groups, Performers, and Popular Recordings Which Used Indian Instruments.

Group	Performer	Record	Instrument
The Beatles	George Harrison	Rubber Soul	Sitar
The Rolling Stones	Brian Jones	Paint it Black	Sitar
The Lemon Pipers		Green Tambourine, & Jelly Jungle	Sitar and Tabla
The Box Tops	Vincent Bell	Cry Like a Baby	Electric Sitar
The Rascals		Once Upon a Dream, & Sattva	Sitar, Tabla and Tambour

African and non-Western Music

In addition to the eastern Indian influence, many students were keenly aware of African and other non-Western influences upon current popular music and jazz. Names frequently mentioned were Olatunji, Herbie Mann, and Mongo Santamaria. Some youngsters knew that Herbie Mann played assorted flutes from Africa and South America; still others discussed the combined African and Central American influences on Mongo Santamaria.

One girl discussed and described the Russian balalaika. As she did not know of particular "pop" recordings which employed this instrument, she and the researcher talked about how it could be used in contemporary popular or "folk-like music. This, of course, was before the Beatles' hit recording Those Were the Days.

Rock'n' Roll, Rock, and Soul

Among the more frequent answers to the question of how twentieth century music differs from music of previous ears were: (a) the "rock" beat; (b) "we have rock'n' roll"; and (c) our music is more "soulful."

Different kinds of rock were described, such as psychedelic-rock, acid-rock, progressive rock, philosophy-rock, jazz-rock, and folk-rock. The common denominator of the above was said to be "the beat." So-called "latin" music was often included as part of "soul." And rock 'n' roll was often used as a catch-all phrase for pop, rock, and soul--even though there are differences.

Soul--according to some students--included "black-music," rhythm 'n' blues," "rock 'n' roll," some gospel singing, and even some latin-American music. Many students said that "in soul the beat is heavier"--the expression "heavier" being a recent slang term for anything believed to have a lot of feeling.

Anything which has a lot of feeling, provided it has the right kind of feeling, was said to be "soulful." One pupil interviewed said that: "it is music which gets next to you, that's what soul is." Soul, explained another youngster, was "a song at a pace which makes a person feel like they are (sic) at the studio in which the

record is being played; it makes a person feel cool and relaxed." Other students, however, said the opposite; that "soulful" records "work you up" and bring out your feelings.

There is "white-soul" too, revealed some of the students--and records which have the approved-of intensity and warmth of feeling are said to be made by "blue-eyed-soul-brothers." In less sophisticated terms, these performers were said to feel more deeply, so as to equal the ability to "feel" which black people in the United States have.

Rock was said to differ from other types of "pop" in: (a) the strength of the "beat"; (b) the volume at which the music is performed; (c) the use of noise and "fuzz"; (d) the frequent use of electronics and different (meaning exotic) instruments; and (e) the topics of the songs, which often deal with protest as well as with love.

Jazz

Several bright students, in an eighth-grade class in one junior high school, traced the history of jazz--from ragtime and the blues, through complex compositions by Dave Brubeck--using recorded examples of Scott Joplin, Bessie Smith, Louie Armstrong, Duke Ellington, Dizzie Gillespie, and Stan Getz. They even discussed recent releases by Cecil Taylor and Charlie Mingus.

Other students, in a different junior high school, were particularly interested in performance of jazz--and more specifically in the "swing" era. The idol of a student clarinet player was Bennie Goodman; but he also knew about Woodie Herman and Artie Shaw, and could play some of the songs which they made famous. He even knew about the Fletcher Henderson band and the beginnings of "swing."

In contrast to this clarinet player was a boy who played the twelve-string guitar--a very bright youngster who freely talked about the recent revival of interest in "blue-grass music," and who disliked both rock and jazz.

Additional Action Research Findings

Data were also collected on more active involvement with twentieth century music. After participating in the Eastman Seminar[1] the researcher worked with junior high school students in learning the "atsia" rhythm of West Africa; improvising on "the blues"; and playing hexachords and tone-clusters at the piano.

Other findings included student reactions to electronic and electronic-influenced compositions, student interest in compositions having changin or irregular meters, and student knowledge of recordings which reflect the influence of musique concrète.

Reactions to a Composition Influenced by Electronic Music

Of compositions (other than rock, pop, and soul) which were played for various groups of students, the most consistently positive responses were elicited by Micheel Colgrass's As Quiet As. Although the composition uses no electronic sounds, it is doubtful whether it could have been written previous to the age of electronic music.

After listening to As Quiet As, some students identified the tonal resources such as bells, chimes,and glass; others re-named the composition calling it "be-dazzled," "rain in the forest," "a rainy day," "sunrise," "universe," and "galaxies"; still others compared it with Simon and Garfunkle's Scarborough Fair, and with electronic music used in the television program Star Trek and the movie Planet of the Apes.

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[1]Seminar in Comprehensive Musicianship at The Eastman School of Music, June 1969, sponsored by The Contemporary Music Project for Creativity in Music Education, and administered by the Music Educators National Conference under a grant from the Ford Foundation.

Student Interest in Compositions Which Employ Changing Meters

The researcher often asked students what they wanted him to play on the clarinet or piano. Among the compositions frequently asked for were: (a) the theme music for the television series Mission Impossible, by Lalo Schiffrin --a musical selection which is in 5/4 meter; (b) the title song from the movie Valley of the Dolls, by Andre Previn--the first three measures being 4/4, 3/4 and 2/4 meters respectively; and (c) the song I Say a Little Prayer, by Burt Bacharach--which as an interesting construction (7, 7, 3, 3, 3, 3,), uses 2/4 meter in the fifth measure, and employs an alternating 4/4, 3/4, 4/4 scheme throughout the fifteenth through twenty-third measures.

The Influence of "Musique Concrète"

Often students were asked to "guess-at" terms and concepts they didn't know anything about.[1] This procedure led to an unexpected development: "daffynitions" of twentieth century music. Two such daffynitions of musique concrète were "unbreakable records," and "people walk on concrete and the noise they make is called musique concrète." The inquiry following, however, generated interest in what the term really meant.

Given the meaning of musique concrète, numerous students provided examples of its influence on popular recordings. Table 2 is a partial listing of those examples, including names of records, performing groups, and sounds used other than the human voice or instruments (although distorted voices and instrumental sounds were used in musique concrète also).

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[1]The assumption was that in a non-penalizing situation, a feeling of ignorance about big words will generate curiosity.

Table 2

The Influence of "Musique Concrète" on Popular Records: Examples Provided by Students of Recordings Which Use Everyday Sounds

Record	Group	Sounds Used
Leader of the pack	Shangrillas	motorcycles
Good Morning	The Beatles	rooster, other farm animals
Ebb Tide		the sea and sea gulls
Yellow Submarine	The Beatles	clinking glasses, and water
Hey Bulldog	The Beatles	dog
Walking in the sand	Shangrilas	sea gulls
Rain	Deep Purple	rain
Sarah Jockman	Allan Sherman	the telephone
Lonely Gothard	Julie Andrews	goats
Captain Kangaroo		keys
Walking in the rain	Ronnetts	thunder

Table 2 (cont'd)

The Influence of "Musique Concrète" on Popular Records: Examples Provided by Students of Recordings Which Use Everyday Sounds

Record	Group	Sounds Used
Hitch-hiker	Leonard Nimoy	car
Pisces, Aquarius, Capricorn, and Jones Ltd.	The Monkeys	the Moog synthesizer, train whistles
Bonnie and Clyde		gun, crashing noises
Batman		punches
Hush		coyote
The Letter	Box Tops	an airplane
My World		a baby crying
Switched on Bach		the Moog synthesizer
And the gods Made Love		toilet
Crosstown Traffic		the sounds of traffic

The Atsia Rhythm

On several occasions, the researcher attempted to appraise whether students would be receptive to the African "atsia" rhythm, and how quickly they could learn it. A sixth-grade class in a new "middle school", was especially receptive to this rhythm in 12/8 meter. ♩ ♩ 𝅘𝅥𝅯 ♩ ♩ ♩ 𝅘𝅥𝅯 | 𝄾 They were able to clap it after several hearings; they were also able to make corrections after the rhythm was purposely changed, and to distinguish its notation from among those of other rhythms; and they were able to sustain the rhythm even when the researcher improvised upon and subdivided the beats.

The above class of thirty students was an integrated class in which about twenty percent of the students were black. Upon individual hearings there were no sharp differences, along racial lines, of ability to apprehend the beats and the rhythm.

The Blues Progression

Numerous children listen to popular music and jazz without knowing that the blues is a twelve measure "form" and a popular chord progression. But attempts to convey this knowledge brought poor response. Even when the researcher was using favorite recordings, the children simply did not care what the structure was--at least not in listening experiences containing no activity.

Children did want to be able to play the blues chord progression (which was fundamental to so many of their favorite records). Thus, enthusiasm was frequently generated by finding a student who played a guitar, and asking him to play I I I I', IV, IV, I, I, V IV I I in several different keys.

It did not matter whether or not the student could play the blues progression in different keys on the guitar; students were shown that they could do it easily with the autoharp. The mild competition generated interest; the students were learning music conceptually--through experience.

Tone-Clusters and Hexachords

The researcher found that many children, when left free to experiment, do one of two things: either they play a great many "dissonances" (i.e. from the acoustical standpoint); or they play in parallel motion. The researcher also found that untrained teenagers often did not use their thumb; what was easiest for them to do was to use the second, third, and fourth fingers of their hand (either separately or together).

Some students were observed using this three-finger position when playing triads in parallel motion; others used it when playing the I - IV - V - IV chord-progression, as in a "montuno" or the "bugaloo." This observation was employed when trying to guide keyboard experiences, and untrained children responded best to that which did not "tax their thumb."[1]

It was also found that the teacher could capitalize on this two-three-four, or four-three-two position for the purpose of teaching the whole-tone scale or hexachords. Hexachords such as D E F F# G# A# could be played in the following manner, D E F F# G# A#. The whole tone scale
4 3 2 2 3 4
C D E F# G# A# could be taught by using the same fingering,
4 3 2 2 3 4
as shown above.

It was found that youngsters could be taught tone-clusters very easily. All they have to do is start with the basic three-finger-position and then add the thumb and pinky when they feel comfortable, and when they could do it with ease.

Conclusions and Implications

Teenagers are capable of, and enjoy descriptive research into the music of their own times. Among the children's repertory of favorite songs are interesting songs which employ changing and irregular meters. Children in junior high school are receptive to, and capable of

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[1]Asking them to bend the thumb under as with the C major scale.

learning non-Western rhythms and concepts such as the African "atsia". Aside from pop, rock, and soul records, children are most responsive to electronic music, or compositions which reflect the influence of electronic music. Junior high school students (especially seventh-graders) enjoy engaging in "deffynitions" of twentieth century styles or compositional techniques--and this serves as an excellent motivation or prelude toward studying these styles more seriously. Untrained teenagers can easily learn parallel chord progressions, hexachords, and tone clusters at the piano.

The implications of these findings seem to be as follows:

(1) interest in pop, rock, and soul can be used to generate interest in earlier twentieth century music,

(2) interest in the Moog synthesizer and in psychedelic-rock can be used as a stepping stone toward learning about the R.C.A. synthesizer and the early pioneers of electronic music,

(3) interest in popular records which use distorted sounds can be seized upon as a stepping stone toward learning about the "futuristo" or the Italian "bruitisimo school," the Pierre Schaeffer "musique concrète school," and John Cage's "prepared piano,"

(4) interest in non-Western influenced jazz can be used as a starting point for learning about the "atsia" rhythm or the "metronomic impulse,"

(5) interest in parallel and modal harmonies may be used for instruction dealing with the music of Liadov, Moussorgsy, Debussy, and Delius.

Recent Literature on Twentieth Century Music

There is a growing body of books, articles, and materials on twentieth century music. Recent books by Salzman, Dori, Machlis, Stuckenschmidt, and Brofsky and Bamberger greatly helped the researcher reexamine ideas about musical styles and the men who shaped them. In this study, a large number of sources were consulted in an attempt to prepare simple, but essentially correct definitions of major twentieth century musical styles and concepts. Data were obtained which challenges certain widely believed ideas.

Impressionism in music, for example, seems to have been more of a Russian-French tradition than strictly a French contribution.[1] Some music educators have greatly exaggerated Debussy's role as an innovator: Forcucci says of Debussy, "He introduced a new sound in music which was in line with this trend called 'Impressionism'" (Italics mine);[2] Coston says that "Claude Debussy was the chief composer of the Impressionistic movement. His music was a direct reaction to the grandiose, heroic manner of the Wagnerian Romantics" (Italics mine).[3] Such statements are oversimplifications and should no longer be made, in the light of recent thought regarding composers such as Satie, Moussorgsky, and Dargomizhsky.

The terms "chance music" and "aleatoric music" should not be used interchangably. Cage was structuring compositions based on pure chance long before the term "aleatoric" came into wide use as a result of Boulez's now famous 1958 article. Although "alea" means dice, aleatoric music is not complete chance music, and Boulez criticized Cage for being dominated by chance elements rather than being able to incorporate them into his music. Boulez's Third Piano Sonata is aleatoric in several ways--such as permitting the performer to play the movements in any order he chooses--whereas Cage's 4'33" of silence is pure chance, and depends upon whatever noises the audience happens to make.[4]

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[1] Brofsky and Bamberger, The Art of Listening, pp.222.

[2] Forcucci, General Music, p.298.

[3] Coston, Modern Music, p.31.

[4] Pierre Boulez, "Alea," Darmstadter Beitrage, cited in H.H. Stuckenschmidt, Twentieth Century Music (The World University Library, 1969), pp.217-21.

The statement that "The first important use of rhythm as a structural element was in Stravinsky's The Rite of Spring" may be an oversimplification.[1] Bartok, influenced by his folk-song researches starting in 1905, wrote compositions in which rhythm was an important structural fact: his fifth Dance in Bulgarian Rhythm for example, and certainly his Allegro Barbaro which was written more than a year before Stravinsky's The Rite of Spring.

Arnold Schoenberg is usually credited for inventing the "twelve-tone method" or "twelve-note technique." Actually, other composers were experimenting with the notion either slightly before, or about the same time as Schoenberg's final formulation of the method in 1923. The Viennese composer Josef Matthias Hauer (1883-1959) wrote in 1920, in his book On the Nature of Music, "The law or 'nomos' of atonal music is that all twelve notes of the temperament are to be repeated over and over again."[1] Thus, three years before Schoenberg, who is often given credit for the first twelve-tone pieces, Hauer not only had been writing purely atonal melodies, but also formulated a "law" of composing with all twelve notes of the tempered scale.

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[1]Experiments in Musical Creativity, op. cit, p.32.

[2]Stuckenschmidt, Twentieth Century Music, op. cit., pp.91-92.

Recent Emphases in Music Education

In recent years, the primary aim of music education has become musicality or musicianship; music education has been rescued from becoming an academic discipline[1] and steered back to its proper place in the realm of aesthetics;[2] and Bruner's influence has resulted in concern for teaching the structure of the subject or the nature of the discipline. Other emphases have included using the discovery method and developing understanding, as well as placing greater emphasis on using more twentieth century music.

The Aims of Music Education

Musicality and Musicianship: Mursell viewed music education as part of the broader process of aesthetic education.[3] Yet Mursell burned a new path and contradicted this approach in one of his many explanations of musical growth: "Surely it (musical growth) could only mean growth in human responsiveness to the essential values and intimations, and meanings of the art itself. It could only mean the process of becoming musical."[4]

This interest in the total process of becoming musical made an indelible stamp upon the thinking of music educators. One can see its influence in the Yale Report's statement that "the development of musicality is the primary aim of music education from kindergarten to the twelfth grade."[5] Its influence is also manifested in the concept of "comprehensive musicianship," the title of one of the publications of the Contemporary Music Project.[6]

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[1]William Hartshorn, "The Study of Music as an Academic Discipline," Music Educators Journal (January 1963), p.25.

[2]Bennett Reimer, "The Development of Aesthetic Sensitivity," Music Educators Journal (January 1965), p.33.

[3]James Mursell, Education for Musical Growth (New York: Ginn and Company, 1948), p.v.

[4]Ibid. [5]Claude V. Palisca, op. cit., p.6.

[6]The Contemporary Music Project For Creativity in Music Education, op. cit.

Mursell's aims, however--"enjoyment," "success," "discipline," "social development," and "widening cultural horizons"--still reflect the Seven Cardinal Principles.[1] As such, they are nonmusical aims. In recent years, music educators such as Wilson have objected to emphasizing music's extrinsic worth.[2] The primary aim of music education has become musicality or musicianship.

Leonhard felt that the most significant development in music education, in the last ten years, has been a consensus that the purpose of music teaching is to develop musicianship. He felt that the task of defining musicianship was not complete, and his first "emphasis for the future" was on teaching the behaviors that constitute musicianship."[3]

Comprehensive musicianship includes skills of writing, composing, analyzing, and listening.[4] It also includes musical understanding, which Mitchell defined as the ability to discern musical relationships of all kinds and to make critical judgements about them.[5] Thus, there are both cognitive and affective components, as well as psycho-motor skills.[6]

Developing musical understanding. Forcucci described how the development of musical understanding had often been neglected in junior high school general music classes.[7]

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[1]James Mursell, Music Education: Principles and Programs (Morristown: Silver Burdett, 1956), pp.37-60.

[2]Harry Wilson, "Music Education, Quo Vadis?" Music Educators Journal (February-March 1965), p.57.

[3]Charles Leonhard, "The Next Ten Years," Music Educators Journal (September 1968), p.48.

[4]The Contemporary Music Project, op. cit.

[5]William J. Mitchell, "The Role of Music History and Literature in the Development of Musical Understanding," Comprehensive Musicianship, op. cit., p.61.

[6]Benjamin S. Bloom (ed.), Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (Longman's Green and Co., 1956).

[7]Forcucci, op. cit., pp.2, 63, 311.

Ernst pointed out that in recent years, when educators began to evaluate the outcomes of music education, even those students who were active in performance groups--though technically well-trained--were frequently deficient in music understanding.[1] McMurray felt that we cannot rely upon instruction in performance skills per se as a means to full understanding of musical content; that to teach sensitivity to aesthetic content we must rely upon other educational experiences than those of performance.[2] Colwell thought it easier to develop understanding in a general music class than through a group rehearsal; that knowledges and skills of listening are more easily taught when unencumbered by problems of performance such as technique, intonation, and balance.[3] Woodworth was concerned that the study of music literature should include listening as well as performing, and listening which was active and disciplined, not passive.[4]

There is additional support for Forcucci's position that excessive emphasis has often been placed upon activities which develop performance skills, rather than experiences which develop musical understanding. Reimer maintained that junior high school students have become ready to study the arts systematically and rigorously from the appreciative point of view rather than primarily by performance.[5] Karel asked the question, "Is it better for a student to spend six years training to take his place on the musical assembly line, or to spend the same amount of time learning how to listen and understand?" Karel strongly rejected the emphasis often given to applied music--with countless hours spent on rehearsing for performance--and felt that music theory, analysis, literature, and composition could all be taught in the time it takes the student to learn the techniques of his instrument.[6]

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[1]Karl Ernst (ed.), Music in General Education (Washington D.C.: Music Educators National Conference, 1965), p.11.

[2]Foster McMurray, "Pragmatism in Music Education," Basic Concepts in Music Education, ed. Nelson B. Henry, pp.30-61.

[3]Richard Colwell, "Music: Both a Performing Art and a Listening Art," Music Educators Journal (January 1966), p.45.

[4]C. Wallace Woodworth, "The Place of Music in the Curriculum," Music Educators Journal (February 1965), p.48.

[5]Reimer, op.cit., p.33.

[6]Leon C. Karel, "The Musical Assembly Line," Music Educators Journal (January 1969), p.85.

Conceptual Learning

Reflecting Bruner's thinking that even young children can learn the "structure" of a subject, and the nature of a discipline,[1] music educators have concerned themselves with teaching musical concepts. Gary, for example, traced the development of a musical concept through the processes of perception, performance, analysis, and discussion.[2] Karel proclaimed that "the new job for aesthetic education is the training of perception."[3] Reimer underscored "the improvement of perception" as the key to the development of aesthetic sensitivity. Among his three categories of methods which improve "aesthetic perceptivity" he included the "development of concepts and factual knowledge."[4]

Until recently, except for that of Russell,[5] most of the work done in studying concept formation has not been in music. In 1964, it was still felt that the nature of concepts, and their relation to the things of which they are the concepts, and the minds which use or contemplate them, were among the most hotly disputed subjects in philosophy.[6]

Hawkins pointed out that significant concepts are not communicated in the first instances and thus cannot be taught; that they grow as stopping places and intersections along paths of experience, which relative to them are preconceptual.[7] But what does preconceptual mean, and how is it related to a percept or perception?

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[1]Jerome Bruner, The Process of Education (Cambridge: Harvard University Press, 1960).

[2]Gary, op.cit., pp.2-9.

[3]Karel, op.cit.

[4]Reimer, "The Development of Aesthetic Sensitivity."

[5]David H. Russell, Children's Thinking (New York: Ginn and Company, 1956).

[6]Julius Gould and William L. Kolb (eds.), Dictionary of the Social Sciences (New York: The Free Press of Glencoe, 1964), pp.120, 491.

[7]D. Hawkins, "Learning the Untouchable," Learning by Discovery: A Critical Appraisal, L.S. Shulman and E.R. Keislar eds. (Chicago: Rand McNally and Company, 1966).

A percept occupies an intermediary place between undifferentiated sensory experiences and concepts. Perception also denotes sensory experience which has gained meaning or significance. When as a result of learning experiences, one understands the relationships of objects which previously were raw, undifferentiated sensory experiences, he is said to perceive these objects. The non-sensory experience involves the development of concepts or ideas about the sensory experiences.[1]

Gary explained that a concept may be thought of as that which remains in the mind of the learner following a given learning experience....a vague notion....a clear understanding....a mental image....a memory of an aural experience....a generalization....or a very specific bit of learning that ultimately will be part of a much broader concept. Developing a musical concept involves (1) listening to, or direct perception of the music, which is the referrent of the concept; (2) performance in which the player or singer also listens in such a way as to know precisely how it sounds as music; (3) analysis of what has been perceived, which may involve recognition by eye or ear, identification by name, or differentiation among the components of what has been heard; and (4) discussion or verbalization of the concepts.[2]

Gary and members of the Elementary Music Study Commission developed basic concepts about rhythm, melody, harmony, form, tempo, dynamics, and tone color. Next, they suggested "experiences which may lead to the development of the concept." Finally, they provided musical examples. A typical page in this valuable document looks something like this:

CONCEPTUAL DEVELOPMENT IN RHYTHM

Concepts	Experiences that may lead to the development of the concept	Musical Examples

[1]Gould and Kolb, op. cit., pp.120, 491.

[2]Gary, op. cit. pp.2-4.

Other music educators, such as Tipton,[1] use a similar format. But the somewhat unwieldy term "experiences which may lead to the development of the concept" has been shortened to "manipulative devices." Among those "manipulative devices" are clapping, tapping, marching, and employing hand levels to design the shape of the melody. Other devices call for using the keyboard or classroom instruments.

Exploration and Discovery

Are children's natural desire to discover meanings for themselves usually suppressed by the education process? Glasser dealt with this issue and differentiated between "learning by discovery" and "teaching to discover." He maintained that "teaching to discover" involves "induction," the procedure of giving exemplars of a more general case, which permits the student to induce the general proposition involved. Assessment of attainment is accomplished by testing whether the student has induced the general proposition involved, by getting him to verbalize it, by getting him to apply it to certain exemplars in a way that indicates he knows the general proposition, or by getting the student to generalize additional exemplars.[2]

In a more unguided exploration and discovery situation, the imposition of a structured instructional sequence is minimized in order to provide a relatively unguided sequence--onto which the individual imposes his own structure. This is purposefully errorful learning, Glasser explained, and there quite naturally are many blind alleys and wrong moves. But perhaps unguided exploration and discovery results in more meaningful concepts.[3]

Olson pointed out that discovery methods have been used in other areas than music--as in the above example--wherein problem-solving and hypothesis testing procedures could be used. He applied the discovery method to the teaching of musical concepts. Using it in the sense of "a systematic procedure to give direction and focus to the exploration, while at the same time retaining spontaneity,

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[1]Dr. Gladys Tipton, Professor of Music, Teachers College, Columbia University, and the author of Adventures in Music.

[2]Robert Glasser, "Variables in Discoery Learning," in Shulman and Keisler, op. cit.

[3]Ibid.

he was opposed to unguided trial-and-error. He felt that if children were merely free to experiment, they were also free not to experiment.[1]

Olson's article contains the following points: (1) the problem to be solved should pertain to a child's experience with a musical composition, (2) the problem should be solved by a musical process, (3) the teacher should provide "clues" rather than tell "right" or "wrong" answers, (4) reinforcement occurs through presentation of the same concept in other musical settings, (5) terms and symbols relating to musical concepts are recorded as they are discovered, and organized for later systematic review, and (6) for review, students should be guided to respond to terms or symbols, not with memorized definitions, but rather by recalling the musical examples wherein they heard the concept, and by describing its sound.

Olson did not want inquiry to veer from the music itself, and become exclusively concerned with information about the place of origin, the attendant social customs of the people, and similar background material. Rather, he advocated focusing on gaining understanding of concepts expressed by the tonal content of the music; such understanding, he thought, could only be developed through exploring the music itself.

Consistent with his interest in the music itself, Olson was equally interested in musicality and musical responses. Any answer which shows that the child has used his musical experiences in a musical way, and which leads to further inquiry, he stated, is a good answer. Some answers, he thought, may be expressed best by a rhythmic movement.

The Content of Music

Among the eleven "content areas" in one reference are: (1) "elements of music," embracing rhythm, melody, harmony, and timbre; (2) "form or design in music," including aspects of unity, contrast, texture, and the development of a musical concept; and (3) "the interpretive aspects of music." The other content areas include the science of sound, the musical score, and types of musical performances.[2]

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[1]Rees G. Olson, "Teaching Musical Concepts by the Discovery Method," Music Educators Journal (September 1967), p.51.

[2]Ernst, op.cit., pp.17-63.

DiRocco called for treating music as a tonal entity, for de-emphasizing "associational interpretation." She discussed the uniqueness of tone, and wanted music educators to establish a relationship between sound and child, rather than between sound and story, sound and painting, or sound and emotion. She deplored the type of "associational interpretation" wherein every oboe was a duck, every tympani roll a storm, and every snaredrum a gunshot.[1]

Woodworth called for "active and analytical listening" based on content areas such as "the qualities of orchestral instruments and choirs," "the texture of chamber music," and "the manipulation and development of musical ideas." He also felt strongly about the intrinsic worth of repertory and the type of repertory chosen. He did not want the music teacher to be afraid of large works. He thought that the dramatic organization of a symphony could actually engage the mind and emotions of a growing child, better than little examples of binary and ternary form, and simple song forms and exercises. The repertory he suggested included large twentieth century works: works of Stravinsky, Copland, and Honegger.[2]

Broudy also wanted masterpieces to be used, and thought of the ability to appreciate masterpieces as an excellent test of musical growth. Commenting further on choice of repertory, Broudy referred to modern jazz as music which would motivate students to listen: "Here is a kind of music that, perhaps, lends itself to serious study, and yet its popular nature tends to speak to the young in heart."[3]

The content of instruction, largely determined by choice of repertory, will determine the musical concepts that are learned. Choice of repertory will also determine many of the classroom activities based upon the content of the music. The "experiences that may lead to the development of

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[1]Sister Theresa DiRocco, "The Child and the Aesthetics of Music," Music Educators Journal Vol. 55 No. 8 (April 1969), p.35.

[2]Woodworth, "The Place of Music in the Curriculum," p.48.

[3]Harry Broudy, "Educational Theory and the Curriculum," Music Educators Journal (November-December 1964), p.32.

the concept" are based upon the musical examples that are chosen, as well as the abstract concept itself.[1]

The ultimate worth of repertory is its capacity to contain and highlight musical concepts. Children must experience music in order to perceive its content, and this perception is an important first step toward developing a concept.[2] The more experience children have in listening to a variety of compositions which manifest particular compositional techniques, the greater is the likelihood that concepts of these techniques will form.

Activities and Experiences in Music

Leonhard called for a change from an activities oriented program to an "experiential" program. He admitted that the "fivefold activities concept" has served us well in making music other than simply singing; but he felt that merely participating in activities does not insure a change of behavior. The change of behavior he wanted was in the direction of increased musicianship: improved abilities in the behaviors that constitute musicianship.[3]

Leonhard differentiated between the activities approach and the experience approach. An experience orientation, he maintained, implies a greater degree of involvement of mind and imagination -- as well as movement of the vocal chords and the feet. What he envisioned was a mind "actively engaged in the discovery of musical meaning, and the solving of musical problems, as well as making value judgements."

Leonhard enumerated five types of behavior in relation to music -- knowing, feeling, hearing, discriminating, and performing -- and maintained that each type of behavior

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[1]Gary, op. cit.

[2]Leonhard, "The Next Ten Years," pp.48-50.

involves a different kind of learning. Learning to "know," for example, involves the process of perception and the formation of concepts. The teacher has the task of organizing experiences to restructure students' cognitive fields. Leonhard predicted that music educators would turn to learning theorists -- such as Bruner, Piaget, and Ausubel -- for ideas on what experiences to use in developing other aspects of musical behavior.[1]

Woodworth praised the teaching of music in elementary schools, in which music is often listened to with action such as walking, skipping, and dancing. If listening must be done in isolation, he wanted active and analytical listening.[2] Analytic listening -- some years earlier -- was viewed as evolving: becoming more mature, intensive, and specific, and merging into ear-training.[3] Mursell wanted ear-training to grow out of analytic listening, and did not want ear-training to deal with abstract tonal drills. Moreover, he wanted the activity or experience of analytic listening to center on the content, form, and structure of the music itself.

Mursell was opposed to the classifying of musical activities as "creative," "performance," and "appreciation" -- preferring to substitute the terms "production," "reproduction," and "enjoyment." In recent years, however, creative activities have received increasing emphasis. Some music educators, for example, have maintained that musical understanding can best be developed through creative activities.[4]

Creative experiences include imitation, analysis, synthesis, and reproduction. They are not limited to those aspects of creativity which involve total originality or

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[1]Leonhard, Op. Cit. [2]Woodworth, Op. Cit.

[3]Mursell, Principals and Programs, p.296.

[4]Jarrett, Op. Cit., and Marsh, Op. Cit.

uniqueness. The teacher's role in guiding creative experiences, therefore, may involve providing models; it may involve creative solutions to problems -- creative problem solving; it may involve "meaningful verbal learning"[1] as opposed to greater use of non-verbal devices in a quest for musicality and musical responsiveness; or finally, it may involve structuring experiences to provide for greater contrast and comparison of musical masterpieces.

Both Arnheim[2] and Piaget[3] noted that thinking and problem solving does not require language. Problem solving, Arnheim pointed out, can be done by animals. Thinking Arnheim asserted, can be said to take place in mental images -- visual, kinesthetic, tactile, auditory. This is not to discount the importance of total creation, originality, or uniqueness of course; but actual "composing" -- or what is most often thought of as musical creativity -- is an advanced skill, a synthesis of many elements. Creativity can mean putting new words to well known songs, or making up a new "tune" to a well known set of lyrics. Creativity can mean suggesting a different orchestration for a song or musical composition. Creativity can mean judging the worth or significance of a musical composition -- whether it should be of greater or lesser length.

The Outcomes of Music

Drawing upon Mursell's conception of "aesthetic responsiveness," Reimer called for the development of aesthetic sensitivity.[4] Gary and the members of the Elementary Music Study Commission spoke in terms of "the development of a sense of beauty and of positive responsiveness to it" as a "major obligation of education."[5]

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[1]D.P. Ausubel, The Psychology of Meaningful Verbal Learning, (New York: Grune and Stratton, 1963).

[2]Rudolf Arnheim, Vision and Thought, Perspectives in Education, Vol.2 No.1, Fall 1968 p20.

[3]Lectures in the Horace Mann Auditorium, Teachers College Columbia University. Notes taken by writer.

[4]Reimer, Op. Cit. [5]Gary, Op. Cit.

Woodworth called the music class "the gymnasium in which youth exercises itself in the habitual experience of beauty."[1] Other writers were concerned with the importance of aesthetic education in a world threatened with the possibility of annihilation, asking the question: "Why survive if we cannot lead a life of taste and grace?"[2]

But other music educators, regarding the outcomes of music education, returned to the aim of musicality. Broudy defined musicality as "the ability to respond to music in terms of its musical properties."[3] He spoke in terms of connoisseurship:

> Musical experiences when cultivated by training gives rise to a special type of interest and enjoyment, similar to that engendered by connoisseurship in any field of human endeavor.[4]

Teenage Capacity To Learn Abstract Musical Concepts

Having discussed recent emphasis regard the aims, content, activities, and intended outcomes of music, the question still remains whether teenagers are capable of dealing with abstract musical concepts. This issue is important in dealing with twentieth century music, because there is increasing complexity to contemporary compositions. Children may respond well to contemporary sounds, but how much will they wind up knowing about them?

Elkind stated that adolescents are capable of "combinatorial logic," and can deal with problems in which many factors operate at the same time. He also stated that adolescents, for the first time in their lives, have the

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[1]Woodworth, Op. Cit.

[2]Ole Sand, "Schools for the Seventies," Music Educators Journal (June 1966), p.40.

[3]Broudy, Op. Cit., p.36.

[4]Ibid, p.143.

following abilities: (1). they can utilize a second symbol system for another set of symbols, (2) words carry much more meaning, and (3) the future is now as much of a reality as the present.[1]

Goodenough and Tyler cited Piaget's conclusion that "adolescence produces the stage at which real abstract thinking is possible, thinking that involves the manipulation of high order abstract concepts...." They felt that there are important implications to "the fact that this (adolescence) is the period in which real abstract thinking is possible for the majority of boys and girls...."[2]

Reimer thought that at the junior high school level, material can be presented in a systematic fashion; that junior high school students have become ready to study the arts systematically and rigorously.[3] Leonhard suggested that beginning in the junior high school, greater emphasis could be placed on "reception learning" in which new material is incorporated in the existing cognitive structure through a process of progressive differentiation. "New material enters the cognitive field, interacts with, and is subsumed under a relevant and more inclusive conceptual system."[4]

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[1]David Elkind, "Cognitive Structure and Adolescent Experience," Adolescence Vol.II No.18 (Winter 1967), 427-35.

[2]Jean Piaget, The Psychology of Intelligence (London: Routledge and Kegan Paul, 1950), in Florence L. Goodenough and Leona E. Tyler, Developmental Psychology, 3rd ed., (New York: Appleton Century Crofts, 1959), 394-95.

[3]Reimer, op. cit.

[4]Charles Leonhard, "Learning Theory and Music Teaching," Comprehensive Musicianship (Washington: D.C.: Music Educators National Conference, 1965), p.56.

III - CONCLUSIONS

This study has yielded primary data on how teenagers think about and respond to various types of twentieth century music. These data, and other findings from secondary sources, have been used to prepare units-of-study. Samples from these units--objectives, pretests, analyses, and teaching strategies--are included in the Appendix of this report.

A large amount of additional material for each unit has been omitted. This material reflects countless hours of consultation of recent literature on twentieth century music --and contains descriptions of twentieth century musical styles, trends, and compositional techniques that are appropriate for use in junior high school. Rather lengthy, it will be available soon in a dissertation entitled Developing Understanding of Twentieth Century Compositions in Junior High School General Music Classes.

The dissertation soon to be available contains additional analyses of compositions and teaching strategies for developing understanding of them, as well as appendixes such as a chronology of musique concrète.

One aim of this study, in particular, was not accomplished: (application of the most recent findings in learning theory to music education.) The researcher had intended to accept Leonhard's challenge that music education has been immersed in a field theory orientation for the past twenty five years, and thus the possibilities for applying learning theory to music education are great but essentially untapped.[1] The researcher read widely about recent trends in music education, about the nature of concepts and percepts, and about teenage capacity to learn abstract concepts, but was not able to apply Ausubel's "Subsumption Theory of Meaningful Verbal Learning and Retention" to music education.

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[1]Charles Leonhard, "Learning Theory and Music Teaching," p.56.

Recommendations

(1) There is a need for further study on teenage perceptions of twentieth century music and how these perceptions can be employed. While the action research conducted in this study has certain advantages over investigations with more formal designs, it also has certain disadvantages. One never knows whether other students in other schools might react in totally different ways. There is need for quantification of data.

(2) Drawing upon the recent emphases in music education--as discussed in the preceding section--the following is designed as a synthesis of ideas to be considered when creating a curriculum in general music:

(a) The primary aim of music education today is musicality or musicianship. Nonmusical aims such as "health" or "citizenship" should not be formulated.

(b) Emphasis should be given to developing musical understanding. In the general music classroom, without the pressures and deadlines of performing groups, the development of musical understanding can take place best. This is done through a diversity of listening, performing, discursive, and creative experiences. Teachers should foster a conceptual understanding of music, namely through guided exploration of the content of music, aimed at permitting students to discover musical concepts for themselves. Conceptual learning can lead not only to an understanding of musical concepts, but also to an understanding of the entire "structure" of musical thought. The development of a musical concept includes listening to, or direct perception of the music. The other steps or processes of conceptual learning are analysis, performance or reinforcement, and verbalization of the concept.

Two important aspects of conceptual learning are chosing appropriate musical examples which contain the concepts to be learned, and planning experiences--or manipulative devices--which will lead to the development of the concept. A variety of physical movements, singing, exploratory, and creative activities should be planned. The voice, the body, classroom instruments, and visual stimuli should all be employed.

(c) The content of music instruction is the music itself; the constituent and expressive elements of music. Associational interpretation should be minimized. The unique aspect of music is tone, and junior high school students are capable of learning abstract musical concepts. Repertory may be chosen which contain significant musical concepts, and need not be programmatic. Large works may be used, including those of twentieth century masters such as Stravinsky and Honegger.

(d) The new focus on "experiences," rather than just "activities," is for the purpose of fostering the "behaviors that constitute musicianship." The new "experiences" imply greater involvement of the mind and imagination, a mind more actively engaged in discovering musical meaning, solving musical problems, and making value judgements.

(e) Creativity manifests itself in many ways: in imitation, analysis, sythesis, and reproduction, as well as total originality. The teacher should promote creativity by providing models, urging creative solutions to problems, using non-verbal devices, and structuring experiences to permit contrast and comparison of musical masterpieces. Reflecting the philosophy that anything can be taught to any child in some way that is meaningful, simple creative acts--such as putting new words to a well-known song or making up a new "tune" to a well-known set of lyrics--can be taught to children.

(f) The outcomes of music should include greater musical insight, awareness, initiative, discrimination, and skill. They should also include the ability to be lifelong perceptive listeners, and intelligent consumers of music. Children may not perform for the rest of their lives, but they will listen to music. They should have some basis for chosing what they listen to.

APPENDIX:

SAMPLE MATERIALS AND REFERENCES

APPENDIX A: TITLES FOR UNITS-OF-STUDY

I. Rock, Pop, and Soul

II. Jazz, Third Stream, and the New Thing

III. Tape; Synthesizers, and Computers

IV. Chance and Aleatoric Music

V. African and Non-Western Music

VI. Impressionism, Expressionism, and Barbarism

VII. Transcendentalism and other American Music

VIII. Dadaism, Neoclassicism, and Gebrauchmusik

IX. Dodecaphony, Serial Technique, and Total Control

X. Neonationalism, Neo-tonality, Neoromanticism, and Eclecticism

APPENDIX B: SAMPLE OBJECTIVES, PRETESTS
AND SUGGESTED ACTIVITIES

Unit I
Rock, Pop, and Soul

Objectives

1) Children explain the "blues" or the "blues progression" and provide detail regarding the twelve bar form (or twelve measure form);

2) Children notate and/or play the blues chord progression, I I I I7IV IV I I V IV I I, on the piano or on the autoharp;

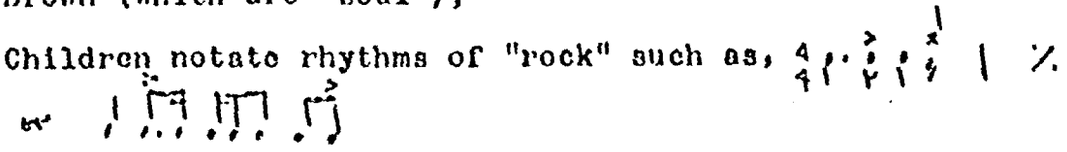
3) Children recall and list favorite records which use the blues progression, such as The Beatles' Get back or A Hard Day's Night — or Wipe Out (not by The Beatles);

4) Children point out relationships of the blues, "rhythm and blues," and modern "soul";

5) Children differentiate between "soul," "rock," and "pop" and also how they differ or are similar to jazz and folk music;

6) Children can give examples of each style, such as records by The Jefferson Airplane or The Mothers of Invention (which are "rock") — or records by James Brown (which are "soul");

7) Children notate rhythms of "rock" such as,



8) Children describe the melismatic nature of some "soul" records, such as those by Aretha Franklin or Marvin Gaye;

9) Children identify "pop" as music which may have some elements of rock or soul, but which is tailored for the widest possible audience — and which may be simpler or may contain many "clichés" which have proved to be popular with previous songs;

10) Children discuss the role of the guitar in "rock" and how it enables quarter or microtones - and why they began to be amplified;

11) Children illustrate the freer intonation possible with a guitar than with instruments of more fixed pitch;

12) Children point out the non-Western influences on this freer intonation, such as the Hawaiin guitar, the Indian sitar, the Japanese Koto, South American flutes, Caribbean steel drums, and African drums which play different pitches;

13) Children compare this freer intonation and relate it to the "blue notes" of the blues;

14) Children give reasons for the use of "fuzz," "noise," and "feedback" in rock;

15) Children provide examples of records which reflect the influence of "musique concrète" and John Cage;

16) Children provide examples of records which reflect the influence of electronic music and which incorporate elements of electronic music;

17) Children provide examples of records which use the Moog Synthesizer;

18) Children illustrate the "back to Bach" movement as reflected in popular music, such as recordings by The Swingle Singers or recordings such as Switched on Bach;

19) Some children attend concerts and write reports on groups such as Ars Nova or The New York Rock and Roll Ensemble - groups which consider rock as a serious art form, or as capable of being a serious art form;

20) Children speculate upon and predict future developments in rock, pop, and soul;

21) Children create their own tunes as the teacher plays a modal progression such as, I | IV | V | I

22) "Slower" children began to call the "tune" the melody and the "beat" the rhythm and/or the meter;

23) Children recognize "modal" progressions upon hearing them in their favorite recordings;

24) Children play simple modal progressions on the piano or on the autoharp - progressions such as Im bVII bVI V (e.g. Am G F E or Cm Bb Ab G) or any ascending progression of minor, minor, major, major such as Em, F#m, G, A or Cm, Dm, Eb, F;

25) Children recognize irregular meters such as 5 in Mission Impossible or in Take Five a jazz 4 number which became so "popular" that many children still know it;

26) Children recognize changing meters in their favorite recordings, such as those in Valley of the Dolls or The Fool on the Hill;

note:

TEACHERS and STUDENTS CAN CREATE MANY ADDITIONAL OBJECTIVES; THE LIST IS BY NO MEANS EXHAUSTED. MANY OF THE OBJECTIVES LISTED HERE ARE A RESULT OF ACTION RESEARCH DONE BY THE WRITER IN VARIOUS DIFFERENT JUNIOR HIGH SCHOOLS. SOME STUDENTS WILL BY CAPABLE OF LESS THAN WHAT IS EXPECTED HEREIN AND OTHERS WILL BE CAPABLE OF MORE! THE TEACHER MAY BE VERY PLEASANTLY SURPRISED BY WHAT STUDENTS OF TODAY KNOW, IF HE OR SHE IS WILLING TO ELICIT THE STUDENTS INTERESTS RATHER THAN TRYING TO SUPERIMPOSE TASTE. WE ARE FORTUNATE THAT THERE ARE MANY TALENTED AND WELL TRAINED COMPOSERS "INTO" THE POPULAR MUSIC OF TODAY - THEREBY FREQUENTLY IMPROVING THE QUALITY AND ALSO INTRODUCING SUBTLE AND SOPHISTICATED COMPOSITIONAL TECHNIQUES INTO THE "GENRE" OF STYLES THAT ARE APPRECIATED BY THE STUDENTS WHOM WE ARE TEACHING.

The following Pre-Test may seem to overlap with many of the above objectives. However, it is designed for immediate use by the less experienced teacher who cannot easily convert statements of objectives into pre-tests or examinations.

Pre-test

1) Name a song in which the meter (or time sign) changes _____

possible answers: Valley of the Dolls;
Promises, Promises;
Fool on the Hill;
I Say a Little Prayer;
Spinning Wheel

2) Name a song which uses the sound of an airplane _____

possible answer: The Letter

3) Name a song or a record album which uses the sound of a rooster, and other sound effects _____

possible answer: "Good Morning" and/or
Sargeant Pepper's Lonely
Hearts Club Band

4) Name a song that is "modal" _____

possible answers: Light My Fire;
Monday, Monday;
Tighten Up;
Soulful Strut

5) Name a song that uses the sitar _____

possible answers: Cry Like a Baby

6) Name a player of the sitar _____

possible answers: Ravi Shankar;
George Harrison

7) Name a record album that used the Moog Synthesizer

possible answer: Switched on Bach

8) Name three different types or styles of "rock"

a) _____
b) _____
c) _____

possible answers: Acid Rock; Hard Rock;
Psychedelic Rock;
Philosophy Rock;
Folk Rock; Jazz Rock;
Country Rock;

9) Name two forerunners of "rock" and "soul"

a) _____
b) _____

possible answers: Rock 'n' Roll;
Rhythm and Blues;
Gospel Singing;
Spirituals; Blues;
Country and Western;
Hillbilly

10) Name a song influenced by African music

_____

possible answers: Oh Bla Di, Oh Bla Da;
The Click Song

UNIT IX

DODECAPHONY,[1] SERIAL TECHNIQUE and TOTAL CONTROL

Objectives

1. Children explain that a tone-row uses all twelve tones of the octave before repeating a tone.

2. Children state the other principles of twelve-tone compositions.

3. Children recognize the sound of twelve-tone music.

4. Children identify twelve-tone music from among several different styles.

5. Children construct a tone-row with melody bells.

6. Children employ the concept of retrograde when asked what could be done with the tone-row.

7. Children write and notate the rows they construct.

8. Children explain that an inversion is like a mirror image and draw a picture of the concept.

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[1] or "twelve-tone technique" - in Europe sometimes called "twelve-note technique"

Suggested Activities

1. Children EXPLORE the 12-tone and whole-tone scales on the resonator-bells and the piano. See if the children can DISCOVER that:

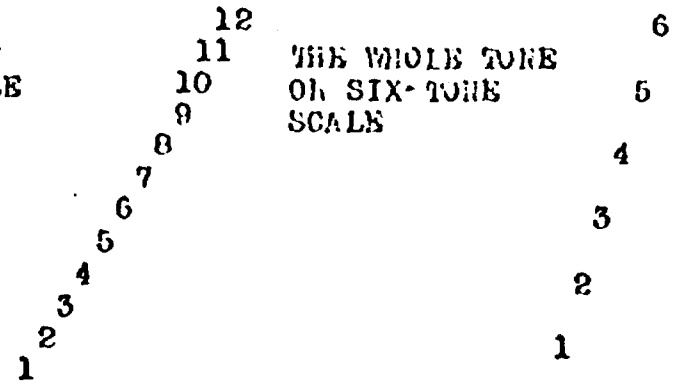
THE 12-TONE AND WHOLE-TONE (or six-tone) SCALES ARE MUCH EASIER TO LEARN THAN ARE THE MAJOR AND MINOR (or diatonic) SCALES

Write the above on the chalkboard, after the children have explored the 12-tone and whole-tone scales. If necessary, write the following on the board as a clue:

THE 12-TONE OR CHROMATIC SCALE HAS TWELVE EQUAL STEPS. EACH STEP IS A HALF STEP BY DEFINITION. EACH OF THESE 12 HALF STEPS IS ALSO CALLED A MINOR SECOND.

THE WHOLE-TONE SCALE HAS SIX EQUAL STEPS. EACH OF THESE SIX STEPS IS A WHOLE STEP BY DEFINITION. EACH OF THESE SIX WHOLE STEPS IS ALSO CALLED A MAJOR SECOND.

If the concept is not yet sufficiently formed for the children to begin development of skills with these scales, draw this diagram on the board:



APPENDIC C: SAMPLE ANALYSES AND TEACHING STRATEGIES

Ebony Concerto, for solo clarinet and jazz band

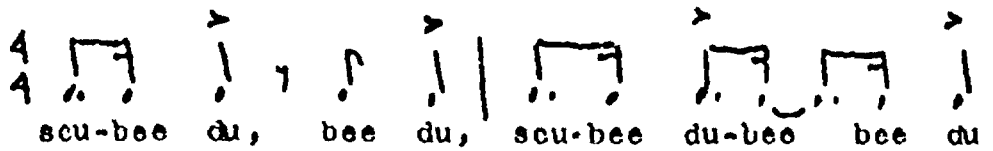
Igor Stravinsky
(1882 -)

1) Listen to the first theme of Stravinsky's Ebony Concerto, and then play it on a bongo.

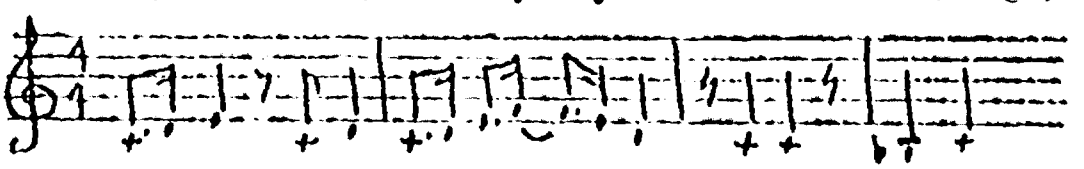
Ebony Concerto: first movement, first theme.

2) Now sing it!

3) Now swing it!! - the way a 1935 jazz musician would - using nonsense syllables known as "scatting." e.g.,



4) Now try to make up new melodies, using this rhythm (above) the way a jazz musician does. e.g.,



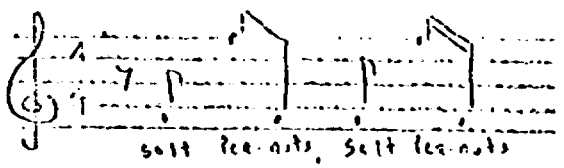
Sample Analysis

Dizzie Gillespie: Salt Peanuts

As an example of the "rebop," "bebop" or just plain "bop" style, listen to Salt Peanuts by Dizzie Gillespie.

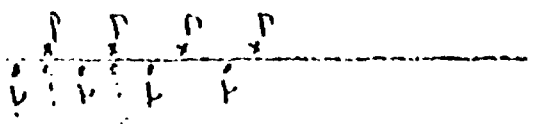
In this composition there are two words - that are spoken, sung or intoned - at the end of most phrases (or musical sentences). These words are "salt peanuts"; and they are usually repeated twice in this rhythm:

salt peanuts rhythm



Clap this rhythm; sing this rhythm. Do the following: alternate stomping your foot and clapping your hands like this:

stomping rhythm



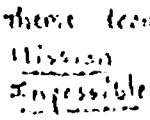
After you have stomped your foot and clapped your hands twelve times, sing the above "salt peanuts rhythm."

"Tango of the Merchant's Daughter"

from The Incredible Flutist

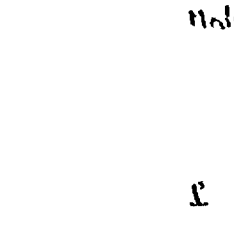
by Walter Piston

Draw upon the children's experience with the well-known Theme From Mission Impossible — the recently popular T.V. series:



or upon their knowledge of Dave Brubeck's Take Five:

Then listen to the "tango" from Piston's The Incredible Flutist:



Who ever heard of a tango in 5 meter? Discuss the use of irregular meters in twentieth century music. Compare this "tango" with that in Stravinsky's L'Histoire du Soldat (The Soldier's Tale).

APPENDIX D: SAMPLE EVALUATION MATERIALS

Matching Quiz

Place the letter of the correct answer after the number on the left-hand side. There can be letters which are used more than once.

1. __	The tone-row	a. Debussy
2. __	*Allegro Barbaro*	b. Bartok
3. __	The whole-tone scale	c. Schoenberg
4. __	Modality	d. Stravinsky
5. __	Sprechstimme	e. Prokofiev
6. __	*Rite of Spring*	f. Mussorgsky
7. __	*Boris Godunoff*	g. Liadoff
8. __	Early Russian Impressionist	h. Berg
9. __	*Pierrot Lunaire*	i. Schoenberg, Berg and Webern
10. __	*Afternoon of a Faun*	j. Satie
11. __	*Scythian Suite*	k. Scriabin
12. __	German expressionists	
13. __	Chords built on fourths	
14. __	Atonality	

Answers: 1-c (i and d also accepted); 2-b; 3-a or f; 4-all but c,h,and i; 5-c,h,and i; 6-d; 7-f; 8-g or f; 9-c; 10-a; 11-e; 12-i; 13-all but g; 14-c,h, and i, but all letters could be accepted

Fill-In Quiz

Impressionism, Expressionism, and Barbarism

1. If a composition uses modality, a whole-tone scale, or parallel 9th, 11th, and 13th chords, we may say the the selection is _____ music or an example of _____.

2. If a work uses sprechstimme (song-speech), is in German, seems to be atonal, and seems to reflect strong, deep emotions, we may say the work is an example of _____ in music.

3. If a piece seems very dynamic, rhythmic, or symbolic of primitive feelings, it may be an example of the style known as _____.

4. If a musical composition seems pointilistic like a kaleidescope, and in which each instrument only plays one note at a time, there is a good chance that the composition was written by _____. These light, airy pieces are often called Musical _____. Because of the wide melodic skips we say that the melody is highly _____.

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