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ABSTRACT

The entire course of study in the one-semester music appreciation course intended for the non-music major was redesigned, using a systems approach, to meet a series of pre-stated instructional objectives and to be sensitive to the individual differences of students. To permit maximum flexibility and individualization, the course consisted of a series of well defined, self-contained instructional units, grouped homogeneously into modules. The four basic modules, each of approximately three and one-half weeks in length, covered prerequisites, instrumental forms, vocal forms, and current popular music forms. A wide variety of resources, both human and material, were used, including the learning laboratory, a dial access system, text books, tape slide sequences, videotapes, programed texts with audio, audio units, multi-screen presentation, a student manual, student and faculty performers, and media specialists. An evaluation of the course showed that it was well-liked by students, efficient in both student and faculty time and space utilization, and effective in overcoming the differences between students without any musical background and thus with training in music. The phases of course development, testing, and evaluation are described. Selected pages from the student manual, course revisions, and related results are presented. (JY)

ED052619

# research report

INSTRUCTIONAL RESOURCES  
CENTER

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Report #7

AN INDIVIDUALIZED APPROACH TO MUSIC  
FOR THE NON-MUSIC MAJOR

Robert M. Diamond  
Thomas Regelski  
Donald J. Lehr

June 1971

Instructional Resources Center  
State University College  
Fredonia, New York 14063

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This project has been developed with the support of the Office  
of Educational Communications, State University of New York.

Project Staff

COURSE INSTRUCTOR: Dr. Thomas Regelski,  
Assistant Professor of Music

PROJECT STAFF (SUNY Fredonia):

Director: Dr. Robert M. Diamond, Director  
Instructional Resources Center

Evaluator: Dr. Donald J. Lehr,  
Assistant Professor  
of Psychology

Content Coordinator: Theodore C. Frazeur,  
Associate Professor

Subject Matter Specialists: Anthony Barresi,  
Assistant Professor  
Laurence Wyman,  
Assistant Professor  
Thomas Regelski,  
Assistant Professor

Production Staff: Graphics and Photography  
Therold S. L. Lindquist, Jr.  
Rose marie Birdsong  
Ronald Warren

Recording  
Richard Goulding

Clerical Supervisor: Mrs. Charlotte Clarke

ADVISORY COMMITTEE AND CONTENT DEVELOPERS:

Dr. Robert Isgro,  
Professor of Music  
State University College,  
Geneseo Paul Eickmann,  
Special Consultant  
Music Education National  
Conference, Washington, D. C.

William Pottebaum,  
Associate Professor  
State University College,  
Brockport Dr. Malcolm Nelson,  
Associate Professor of English  
State University College,  
Fredonia

William Tallmadge,  
Professor of Music  
State University College,  
Buffalo Mrs. Marlene Lindquist  
Instructor of Art  
State University College,  
Fredonia

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## Table of Contents

Project Staff	
Acknowledgments	
I. The Problem . . . . .	1
II. Purpose . . . . .	4
III. Developmental Procedures and Rationale . . . . .	4
IV. Course Description . . . . .	7
V. Resources . . . . .	14
A. Independent Learning Laboratory . . . . .	14
B. Dial Access System . . . . .	14
C. Instructional Materials . . . . .	15
D. Instructional Resources Center . . . . .	22
E. Student and Faculty Performers and Specialists	22
VI. Evaluation . . . . .	23
A. Procedures . . . . .	23
1. General . . . . .	23
2. Study Time and Achievement . . . . .	24
B. Results . . . . .	25
1. General . . . . .	25
2. Study Time and Achievement . . . . .	37
3. Summary of Data Analyses . . . . .	40
4. Student Input . . . . .	43
a. Student Questionnaire Results . . . . .	47
b. Student Opinionaire Results . . . . .	51
c. Representative Student Comments . . . . .	63
5. Instructor Comments . . . . .	67
VII. Project Costs . . . . .	80
VIII. Discussion . . . . .	86
IX. General Observations . . . . .	92
X. Conclusions . . . . .	95
Appendices:	
A. Student Manual, Selected Pages . . . . .	97
B. Course Revisions & Related Results . . . . .	114
C. Student Opinionaire . . . . .	124

## AN INDIVIDUALIZED APPROACH TO MUSIC FOR THE NON-MUSIC MAJOR

In the fall of 1969 the Instructional Resources Center of the State University College at Fredonia joined with the Music Department in exploring a new approach to the introductory music course for the non-music major. A pilot project covering the two-week opera unit of the course was undertaken with emphasis being placed on individualization and independent study.<sup>1</sup> As a result of this pilot study a decision was made to completely redesign the entire course of study with support for this project being provided by the College and the Office of Educational Communications, State University of New York. This report covers the first semester of implementation and includes, in the Appendix, for comparison purposes the revision of the first portion of the course during the following semester.

### I. The Problem

The music appreciation course at the College is the basic, one semester elective course in music for the non-music major. For the majority of the hundred or so students enrolled it will be the only music course they will take during their undergraduate program. As noted in the previous report,<sup>1</sup> this course,

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<sup>1</sup>Robert M. Diamond and Anthony Barresi, A Modular Approach to Music Appreciation with Emphasis on Independent Study, Instructional Resources Center, State University College, Fredonia, New York (May 1970).

like the introductory offering in almost any discipline, faces a series of basic problems:

1. It is usually taught, for economical reasons, by the large-group lecture demonstration major.
2. It is often staffed, on a rotational basis, by members of the Department whose professional interest is in a more specialized area.
3. It attempts to cover an extensive amount of material in a relatively short time.
4. As traditionally taught, it is insensitive to the different musical backgrounds, interests, and abilities of the students. (The musical experience of the students in the course range from 8 to 10 years of band or vocal training to some students with no musical training whatsoever.)
5. It is usually inefficient in the use of both student and faculty time and in the use of other human and material resources.

The introductory music course has suffered from two other traditional weaknesses.

1. The dissemination of the necessary information; e.g. theory, forms, styles, was achieved mainly, if not exclusively, through reading assignments and lecture. This approach frequently proved to be of little interest

to the musical neophyte, and often counter-productive since this information was not, as far as the student was concerned, related to the aural skills and concepts which form the *raison d'etre* of the course.

2. The amount and quality of listening experiences was handicapped by the very nature of the course. In class, usually as a part of a lecture, recorded examples of the music being discussed would be played. Even if the class listened attentively, which was not always the case, the instructor could not be sure if the individual student had heard those factors for which the example was played. If the student did hear these factors, there was no way to tell whether he understood them and was able to transfer this understanding to a new and different situation. Coupled with this problem was that of "outside", "recommended" or "required" listenings which not only suffered from the same weaknesses, but also from the fact that many students did not bother to complete the assignment. Those who did, of course, were likely to become frustrated even more by the totally unguided nature of the experience: no self-evaluation was possible until the student received his grade on periodic examinations.

As a result the main concerns of this basic course in music

were only haphazardly attained. All too often the frequent outcome was that many otherwise intelligent and interested students were "turned off" to quality music.

## II. Purpose

The objective of this project was, therefore, to design a course that would not only meet a series of pre-stated instructional objectives but one that would be sensitive to the individual differences of students while efficiently using the available resources.

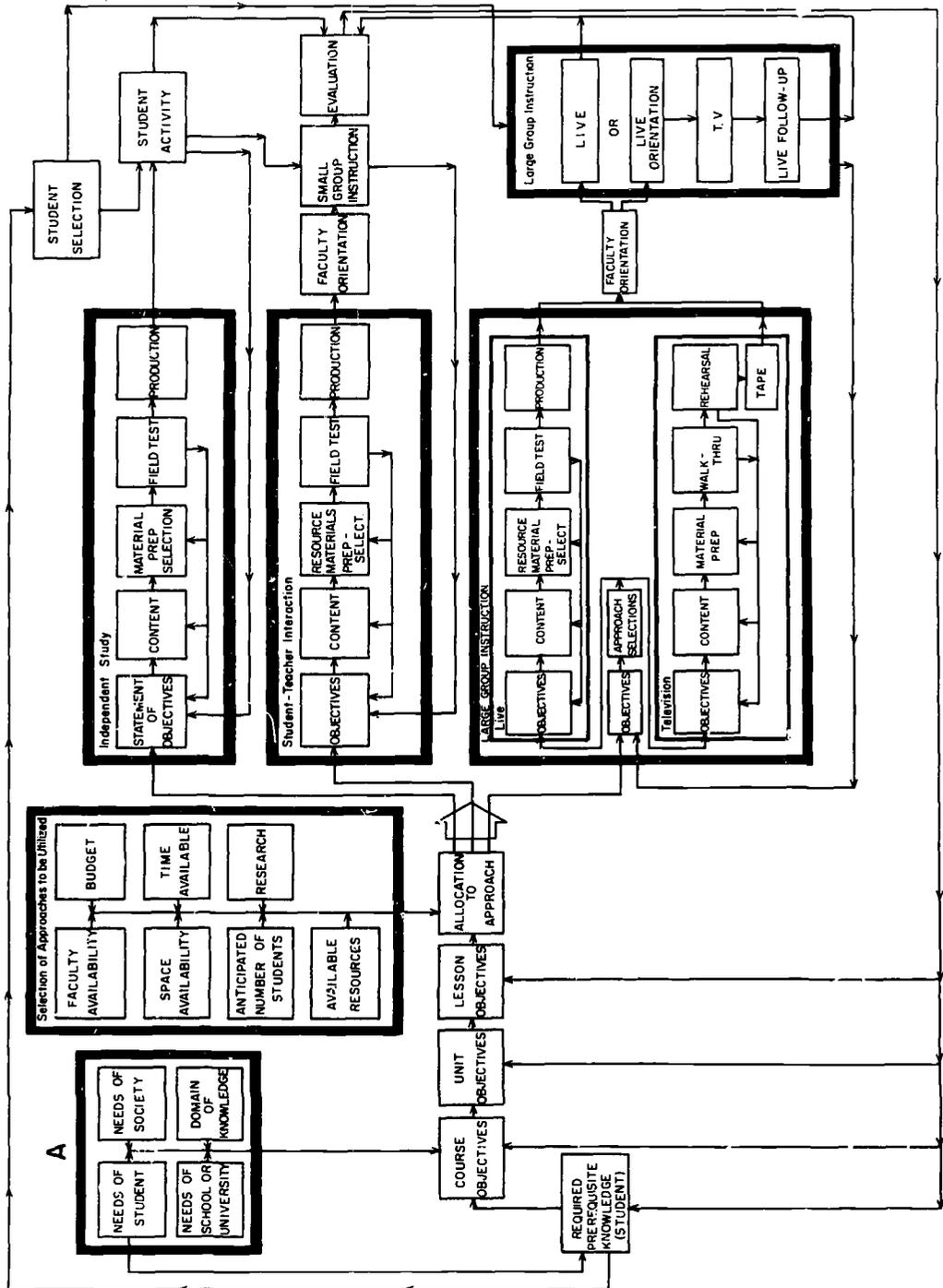
To permit maximum flexibility and individualization, a decision was made to design a course that would consist of a series of well-defined, self-contained instructional units, grouped homogeneously into modules. This approach had several additional major benefits. By being "self-contained" and designed to meet a pre-stated series of objectives, each unit could be evaluated and adapted individually by other campuses to meet their own unique needs and instructional sequences. The evaluation and revision could also be accomplished on a unit-by-unit basis so that units within modules could be rearranged as could the modules themselves.

## III. Developmental Procedures and Rationale

The development and field testing process followed a basic systems approach (diagram I). Based on the results of the pilot project, student questionnaires and subject matter

Diagram I

A SYSTEMS APPROACH TO COURSE DEVELOPMENT



priorities, an instructional sequence was developed by an advisory committee. This committee represented various subject area specializations and viewpoints.<sup>2</sup>

For maximum flexibility and effectiveness the modular concept was evolved based on the following rationale:

1. That some students had a prior knowledge of music and therefore, did not require all instructional components.
2. That students had differing areas of interests within the subject area and therefore, were more interested in certain instructional components than others.
3. That most material normally presented in the lecture/demonstration could effectively be covered by the

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<sup>2</sup>Paul Eickmann, Special Consultant in Teaching Technology to the Music Educators National Conference, Washington, D.C.

Dr. Robert Isgro, Professor of Music, State University College, Geneseo, New York.

William Pottebaum, Acting Associate Director of Music and Associate Professor, State University College, Brockport, New York.

William Tallmadge, Professor of Music, State University College, Buffalo, New York.

Dr. George Browder, Assistant Professor of History, State University College, Fredonia, New York.

Theodore Frazeur, Associate Professor of Music, State University College, Fredonia, New York.

Mrs. Marlene Lindquist, Instructor of Art, State University College, Fredonia, New York.

Dr. Malcolm Nelson, Associate Professor of English, State University College, Fredonia, New York.

assignment of "structured" independent learning sequences followed by small group seminars.<sup>3</sup>

4. That the most effective use of the instructor would be within the seminar interaction situation and not as a presenter of information.

As noted previously, a fundamental concept was the use of "structured" independent learning units for the presentation of concepts, review, re-inforcement and refinement seminars for the opportunity of student-faculty interaction, and large class meetings for the viewing of "live" performances. To permit maximum flexibility the students were required to sign up for six class hours per week. While never meeting for this number of hours in any single week, this did permit the scheduling of optional seminars and of special meetings when they were necessary.

#### IV. Course Description

The course itself was divided into four basic modules of approximately three and one-half weeks each. Each of these was further sub-divided into a number of separate self-contained units. The four modules were (see diagrams II, III, IV, and V):

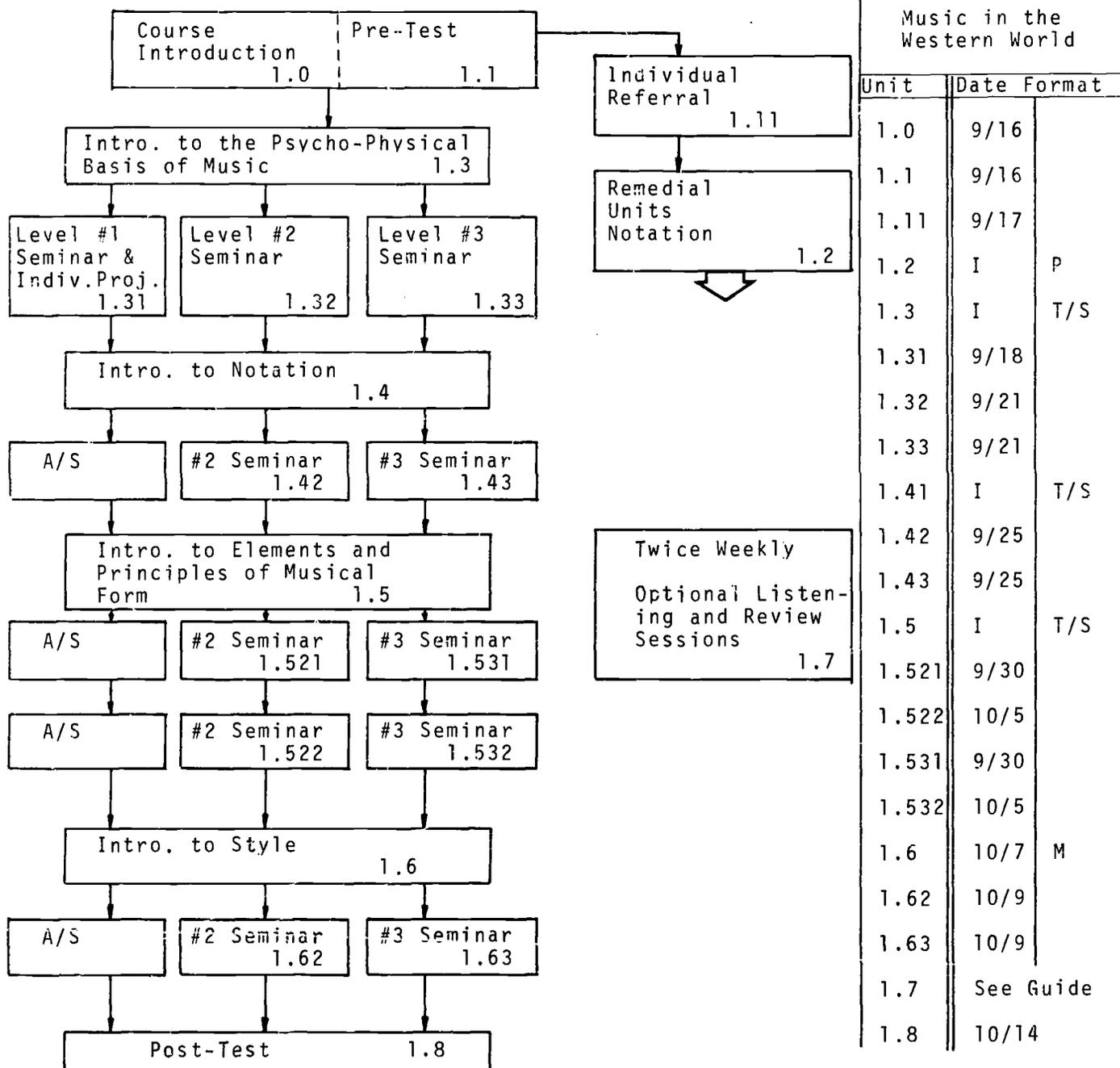
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<sup>3</sup>"Structured" independent study is used throughout this report to identify the process of assigning specific, carefully designed instructional units that the student is responsible for completing on his own time prior to a seminar or class session.

Diagram II

# MODULE I

## INTRODUCTION AND PREREQUISITES

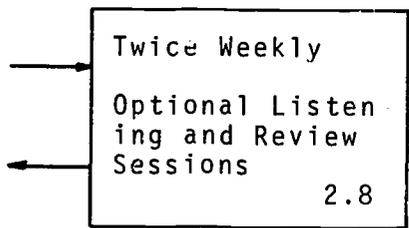
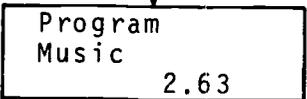
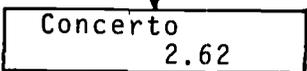
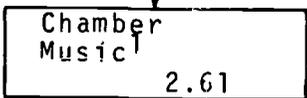
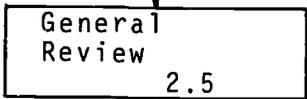
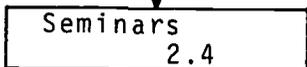
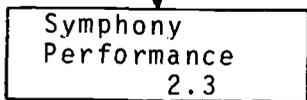
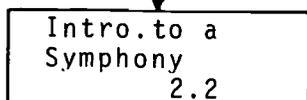
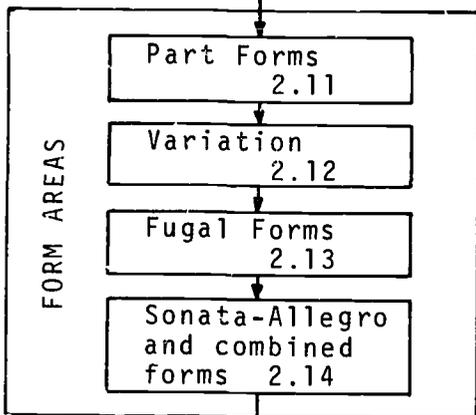
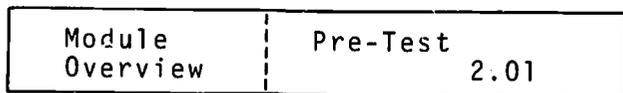


Music in the Western World		
Unit	Date	Format
1.0	9/16	
1.1	9/16	
1.11	9/17	
1.2	I	P
1.3	I	T/S
1.31	9/18	
1.32	9/21	
1.33	9/21	
1.41	I	T/S
1.42	9/25	
1.43	9/25	
1.5	I	T/S
1.521	9/30	
1.522	10/5	
1.531	9/30	
1.532	10/5	
1.6	10/7	M
1.62	10/9	
1.63	10/9	
1.7	See Guide	
1.8	10/14	

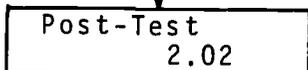
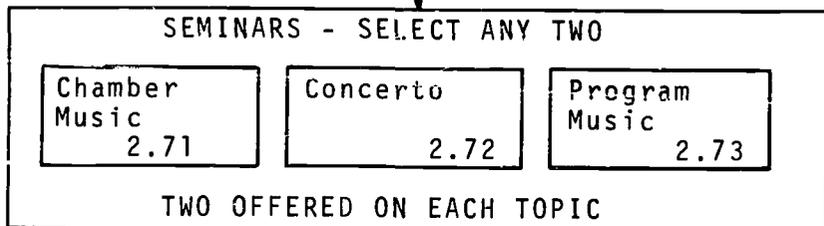
A/S: As assigned by instructor

INSTRUMENTAL FORMS Diagram III

**MODULE II**



Music in the Western World		
Unit	Date	Format
2.01	10/16	
2.11	I	P/A
2.12	I	P/A
2.13	I	P/A
2.14	I	P/A
2.2	I	DA
2.3	10/26	Film
2.4	10/28 10/30 11/2	
2.5	11/2	
2.61	I	P/A
2.62	I	P/A
2.63	I	P/A
2.71	11/4	
2.72	11/6	
2.73	11/9	
2.8	See Guide	
2.02	11/11	

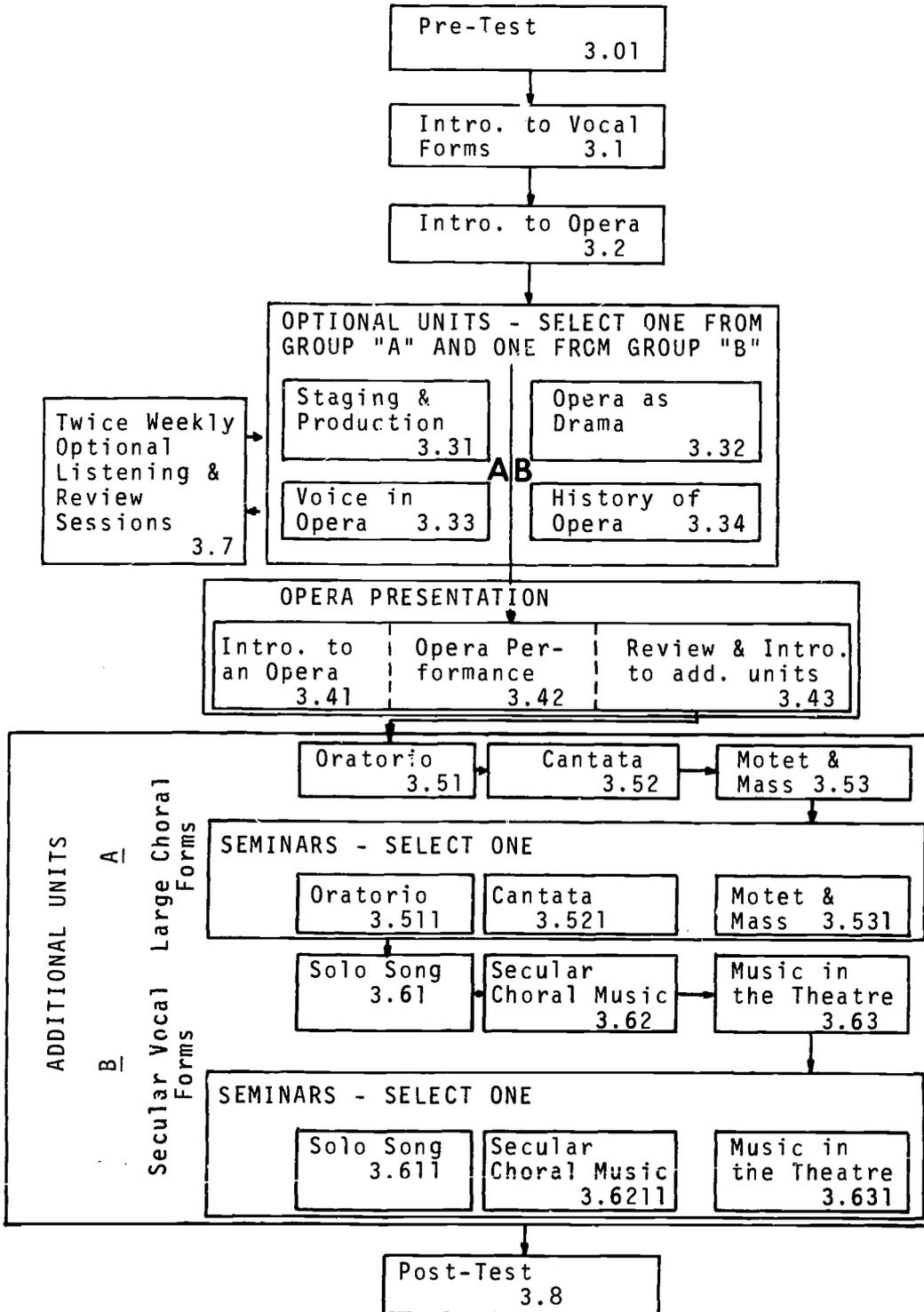


<sup>1</sup> Includes quartet, small ensemble and solo sonata

Diagram IV

VOCAL FORMS

MODULE



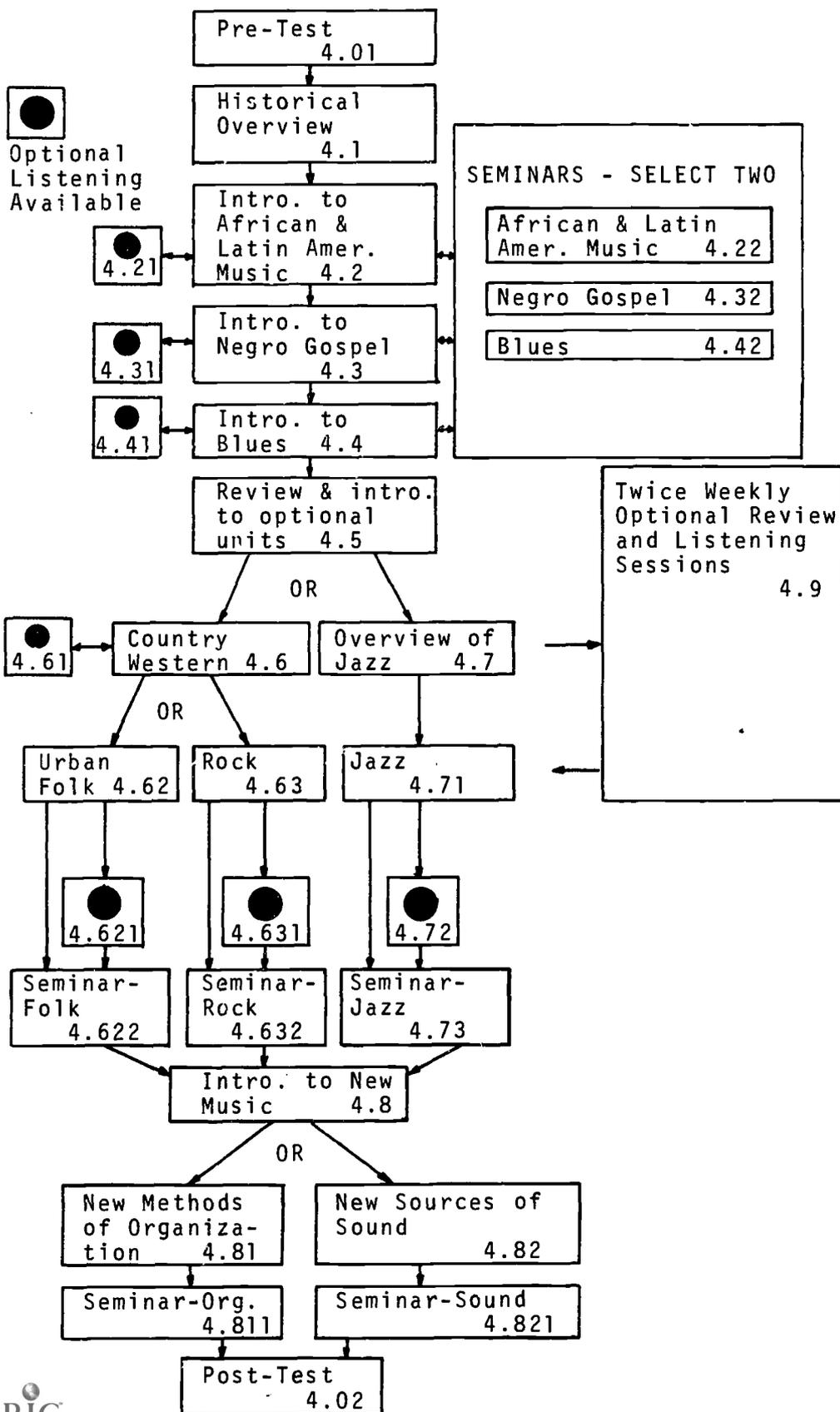
Music in the Western World		
Unit	Date	Format
3.01	11/13	
3.1	I	P/A
3.2	I	P/A
3.31	I	T/S
3.32	I	R
3.33	I	DA
3.34	I	R
3.41	11/23	2 hr spec
3.42	11/23	ial meet
3.43	11/23	ing
3.51	I	P/A
3.52	I	P/A
3.53	I	P/A
3.511	12/4	
3.521	12/4	
3.531	12/7	
3.61	I	P/A
3.62	I	P/A
3.63	I	P/A
3.611	12/7	
3.621	12/9	
3.631	12/9	
3.7	See Guide	
3.8	12/11	

Diagram V

MODULE

IV

"TODAY"



Music in the Western World		
Unit	Date	Format
4.01	12/14	
4.1	I	DA
4.2	I	P/A
4.21	I	DA
4.22	12/16	
4.3	I	P/A
4.31	I	DA
4.32	12/18	
4.4	I	P/A
4.41	I	DA
4.42	1/4	
4.5	1/6	
4.6	I	
4.61	I	DA
4.7	I	
4.62	I	
4.63	I	
4.71	I	
4.621		
4.631		
4.671	I	DA
4.622	1/8	
4.73	1/11	
4.8	1/11	
4.81	I	
4.82	I	
4.811	1/15	
4.821	1/15	
4.4	See Guide	
4.02	Exam Period	

## I. Introduction and Prerequisites

Structured to bring each student, on an individual basis, to the level of musical sophistication required for success in the modules that followed. After a brief introduction, students were given a short test to evaluate their musical backgrounds. Based on their performance, a series of programmed independent learning units were assigned on an individual basis to correct those weaknesses that were identified. Students with comprehensive musical backgrounds were given an opportunity of working independently on projects selected in a conference with the instructor. During these sequences all students completed independent learning units on the basic fundamentals of music, notation and its history, elements and principles of music, and the concept of style. In addition seminars were scheduled for each of the three levels to provide review and the opportunity for students to ask questions of the instructor. As an additional resource, upper division students majoring in Music Education were available to students requesting tutoring assistance.

## II. Instrumental Forms

An introduction to the basic forms in music

with emphasis on: instrumental music, symphony, concerto, chamber music and program music.

Primarily a sequence of independent learning units with two series of seminars, some student options and a symphony performance. When possible seminars contained "live performances".

### III. Vocal Forms

An introduction to vocal and choral music: voices and chorus types, opera, oratorio, passion, cantata, motet and mass, solo song, secular choral music and music in the theatre. While generally of the same format as Module II this sequence included a "live" opera dress rehearsal and an increased number of seminar options.

### IV. Today

African heritage and Afro-Latin American music, Negro gospel, blues, rock, folk, and the "New Music". A major departure from the previous modules this sequence provided the student with an extensive number of options as he progressed through the 3½ week period.

During the developmental stages, the modules themselves underwent as many as eleven revisions with the final sequence for the fall semester being based on a variety of factors including time, space, objectives, and resources. The

module diagrams were included in the Student Manual and served a major communications function by describing to students the sequence to be followed and the options available to them. (The following semester revisions will be found in Appendix B.)

#### V. Resources

A wide variety of resources, both human and material, were utilized in the design and implementation of this project. These included:

##### A. Independent Learning Laboratory

This facility has been designed to provide maximum capability for "structured" independent study. With 56 student stations designed to permit equipment to be added or subtracted as needed, this laboratory has had, in its second year of operation, over 2,000 student sign-ins in a single month. While some carrels are set up on a weekly or semester basis to handle a specific instructional sequence, others are designed for use in many courses. Capabilities range from silent and sound 8mm films and tape-slide lectures to calculators, slides, filmstrips, programed texts, and audio cassettes. As many as 45 courses have used the laboratory during a single semester.

##### B. Dial Access System

With 78 stations located throughout the campus, this

An Individualized Approach to Music for the Non-Music Major  
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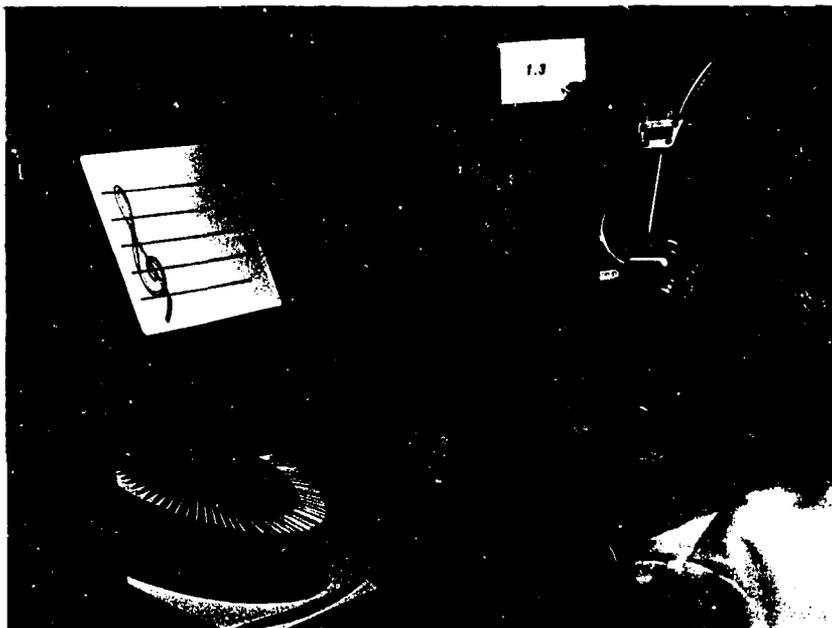
The combination of branching programmed booklets and audio cassettes proved highly effective in developing aural skills.



The emphasis on "structured" independent study permitted the instructor to spend a greater part of his time in seminars and in direct contact with the students.

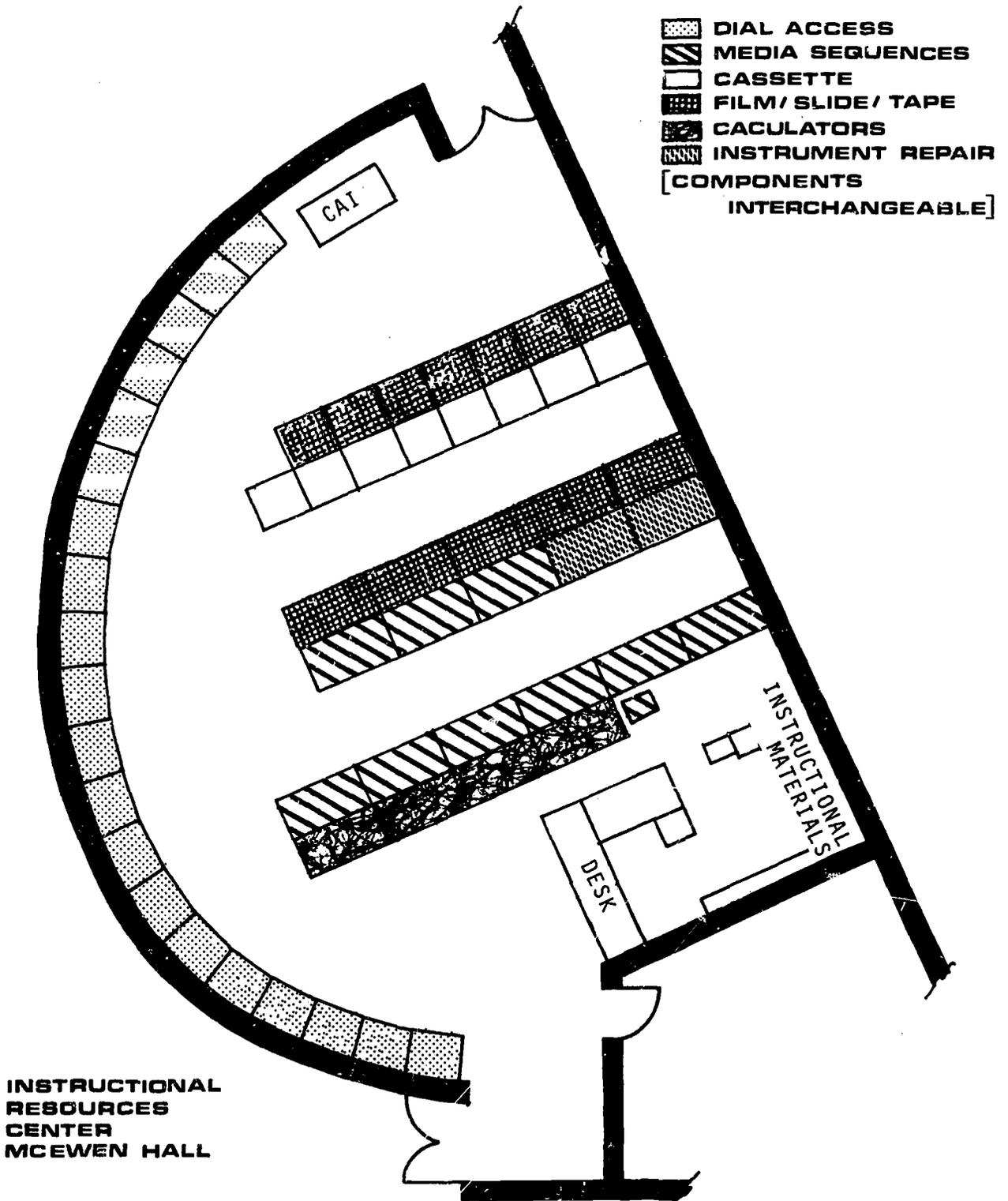


For maximum accessibility optional listening assignments were placed on the College's campus-wide dial access system



Tape-slide sequences located in the Independent Learning Laboratory were used for various sequences including the introduction to notation, the introduction to the elements and principles of musical form, and to review the history of jazz.

# INDEPENDENT LEARNING LAB STATE UNIVERSITY COLLEGE FREDONIA



system provides as many as 70 channels of audio on a seven-day-a-week, 24-hour-a-day basis. Stations are located in the study areas of all dormitories, the music area of the library, music building and in the Independent Learning Laboratory. For sequences with heavy utilization, a time clock system makes it possible to schedule individual channels to begin regularly, 24 hours a day, on a 15, 30, or 60 minute schedule. At the request of students, cassettes of the identical materials were placed in the Independent Learning Laboratory. This approach permitted students to stop, back up and repeat . . . a process not possible on the dial access system. Thus, aside from optional listenings and a small number of other assignments the dial access system performed a supplementary role.

C. Instructional Materials

In an effort to provide the most effective instructional program possible, existing material resources were evaluated and utilized whenever possible. In those cases where new materials were required, they were developed locally. Commercially prepared materials included:

1. Essentials of Music by Roger Chapman, a branching programed text published by Doubleday.

Sections of this volume were assigned on an

Referral Card

# REFERRAL CARD

NAME: \_\_\_\_\_

As a result of your performance on the pretest you have been assigned to level:

- I: First Meeting- Mason Aud, 12 noon  
on Friday, Sept. 18th.
- II: First Meeting- Mason 103, 8 a.m. on  
Monday, Sept. 21st.
- III: First Meeting- Mason Aud, 12 noon,  
on Monday, Sept. 21st.

In addition, to assist you in your work in this course, you are assigned the following sections in Essentials of Music by Chapman (as checked). It is suggested that you also complete the self-test at the end of each assigned unit.

✓	No	Title	Pages
	1	Notation of Pitch	1-39
	2	The Major Scale	40-63
	3	Major Scale in Sharp Keys	64-98
	4	Major Scale in Flat Keys	99-132
	5	Rhythmic Notation	133-192
	6	Measure, Meter & Time Sig.	193-216
	7	Compound Meters	217-249
	8	Minor Scales	250-293
	9	Other Scales and Modes	294-318
	10	Intervals	319-382
	11	Introduction to Triads	383-439
	12	Transposition and the C-clef	440-480
	13	Performance Terms and Symbols	481-488

These units should be mastered for the examination following Module I.

MUSIC IN THE WESTERN WORLD (1.11)

individual referral basis as part of Module I - Introduction and Prerequisites, with a "referral card" being used for this purpose (see example, page 16).

2. An Audio Visual History of Jazz by Orrin Keepnews, a series of records with filmstrips and script published by Educational Audiovisual, Inc. For independent learning purposes the filmstrips were cut into slide series and used with audio cassettes.
3. Shostakovich's Ninth Symphony conducted by Leonard Bernstein, a film published by McGraw-Hill.
4. The Norton Scores, Volumes I and II, W.W. Norton & Co., Inc., edited by Roger Kamien.
5. The Medium by Walter Louendahn Productions, a film production of Menotti's opera by the composer himself.

The vast majority of materials were, however, locally produced. This was necessitated by the lack of materials designed to meet the instructional objectives in the format being used. In each instance the media or combination of media was selected to provide an efficient and effective answer to the instructional problems being faced.

### Tape-Slide Sequences

1. Introduction to the Psycho-Physical Basis of Music
2. Introduction to Notation
3. Introduction to Style
4. Introduction to Elements and Principles of Musical Form
5. Staging and Production
6. Introduction to Jazz

### Video Tapes

1. The Medium, production of the opera recorded at the State University College, Fredonia.
2. Gospel Singing, a recording of the student Gospel Singers of the State University College, Buffalo, taped at that institution for this course.
3. The Essence of Jazz, video tape of the film produced and written by Stan Kenton; by permission of the producer.

### Programed Text with Audio

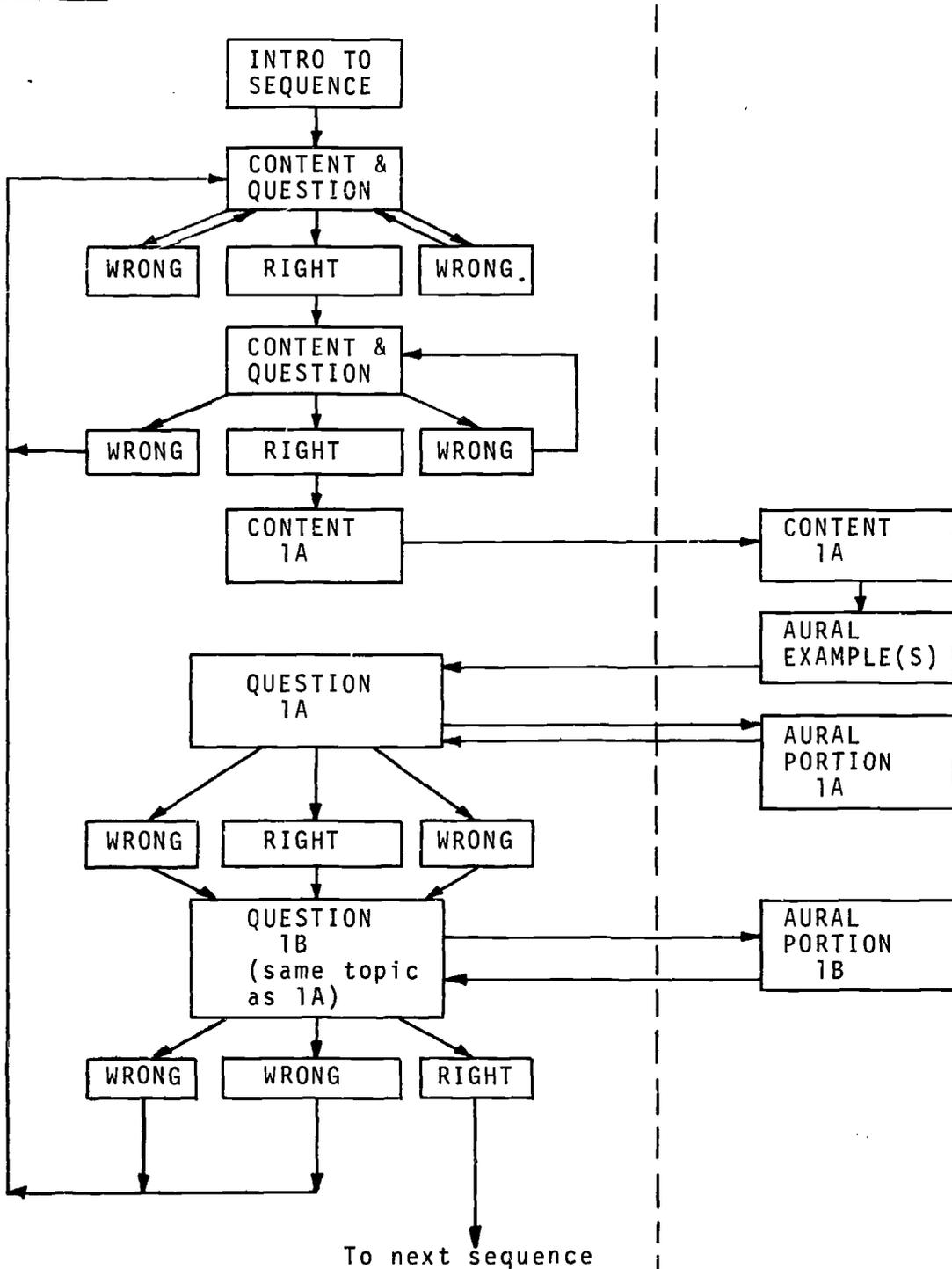
Combining a branching programed booklet with an audio cassette, these units (see diagram VI) permitted students to not only hear specific segments as they were discussed, but to be periodically self-tested on their aural and cognitive skills. These were prepared on the following topics:

Diagram VI

PROTOTYPE INSTRUCTIONAL SEQUENCE  
(BRANCHING PROGRAM WITH AUDIO)

Written

Audio



Introduction to Part Forms	2.11
Introduction to Variation Forms	2.12
Introduction to Fugal Forms	2.13
Introduction to Sonata-Allegro and Combined Forms	2.14
Introduction to Chamber Music	2.61
Introduction to Concerto	2.62
Introduction to Program Music	2.63
Introduction to Vocal Music, Part I The Text and Musical Texture	3.11
Introduction to Vocal Music, Part II The Chorus and Voice Types	3.12
Introduction to Opera, Part I	3.21
Introduction to Opera, Part II Listening	3.22
Oratorio, Part I Introduction	3.511
Oratorio, Part II The Messiah	3.512
Introduction to Cantata	3.52
The Passion, Mass Forms and Motet Part I The Passion	3.531
The Passion, Mass Forms and Motet Part II Mass Forms and Motet	3.532
Introduction to Solo Song	3.61
Introduction to Secular Choral Music	3.62
Introduction to Music in the Theatre	3.63 (no audi

#### Audio Units

Placed on both the dial access system and in the

#### Independent Learning Laboratory:

Introduction to a Symphony	2.2
Opera Example: <u>Gianni Schicchi</u> by Giacomo Puccini	3.21
Voice in Opera	3.33
Historical Overview of Afro-American Music	4.1
Introduction to African & Latin American Music	4.2
Introduction to Negro Gospel	4.3
Introduction to the Blues	4.4
Introduction to Country Western Music	4.6
Introduction to Urban Folk Music	4.62
Introduction to Rock	4.63
Avante-Guarde Jazz (Optional)	4.7-III

(NOTE: Additional optional listening assignments were available throughout the course. It should also be noted that due to student feedback during the test period, Units 4.1 - 4.63 were redesigned for the second semester as booklets with audio cassettes accompanied by further optional listening.

### Multi-Screen Presentation

Introduction to Style, a three screen tape-slide presentation.

### Student Manual

A key element within the course was the Student Manual. Designed to serve as a guide throughout the course the manual contained, in addition to a description of the course and the module diagrams, detailed materials for each of the many instructional units of the course.

This included:

1. The unit number, corresponding to the module diagram.
2. The format for each unit (tape-slide, programmed booklet with audio, etc.).
3. A statement of objectives in measurable terms.
4. Prior and post assignments.
5. Suggested listening.
6. Required materials.

To permit self-evaluation on the part of the student

many units contained work pages that were placed in the manual and used with the sequences. Additional data, when pertinent, was also included. Select pages from the manual will be found in Appendix A.

D. Instructional Resources Center

A support unit to the academic program at Fredonia, the Instructional Resources Center played an integral part in the development, implementation and evaluation of this project. Responsible for the general implementation of the program, staff of the Center collected and edited written materials, trained faculty in the skills necessary for development and were responsible for all areas of production--audio, video, graphics and photography. All written materials were also prepared in the Center.

E. Student and Faculty Performers and Specialists

When possible "live" performances were used within seminars and formal group meetings. These included student ensembles, a dress rehearsal of an opera followed by a question & answer period with the director and the composer, and a presentation by the outstanding concert pianist Claudette Sorel. Specialists in some of the areas being discussed, jazz, rock, etc., also volunteered to assist at specific seminars. While obviously

not consistent from semester to semester this "live" component was an integral part of the overall course.

## VI. Evaluation

### A. Procedures

#### 1. General

All students, those with and without musical backgrounds, were given both written and aural pre- and post-tests, prior to the start and at the completion of each instructional section (module) respectively. These test scores provided the basic measure of analysis. Thus, for each instructional section, performance measures were available for: (a) pre- and post-tests; (b) aural and written formats; and (c) students with and without musical backgrounds.

Although there were an equivalent number of test items on all pre- and post-tests, the post-test items were judged by the instructors to be somewhat more difficult than the pre-test items for each instructional section. There were neither equivalent numbers of test items for the written and aural formats within an instructional section nor for pre- and post-tests across the instructional sections. Because there were

different numbers of test items as a function of format and section, all test scores for all students were transformed to percent data. Data employed in the analyses of variance that follows were, therefore, percent of the test items correctly answered by each student.

In addition, attitude scales were administered in each instructional unit (there were approximately 30 of these) to random samples of from 20 to 30 students. The students also completed a course opinionnaire at the end of the semester.

## 2. Study Time and Achievement

To explore the relationship between the time spent in the Independent Learning Laboratory and its relationship to achievement, a random sample of 13 students from achievement Levels II & III were selected and compared for Module II. This module (Instrumental Forms), lasting from October 16th to November 11th, contained eight independent learning units, one film presentation, and three seminars for each student. Seven of the eight independent units consisted of programmed booklets with audio cassettes, the eighth was an audio sequence placed on the dial access system.

For each student, the number of visitations, the

total number of minutes spent in the laboratory, and the grades received on the module's post-test were compared and related.

For statistical purposes the number of visits, and the aural and written grades were transformed employing an arc sine transformation. Measures of correlation were used to relate time and achievement for both levels. Several t-tests were used to compare a) study time with grades and b) study time as a function of level.

## B. Results

### 1. General

Data analyses are presented for each of the four instructional sections separately. Identical analyses were performed on each section; due to very small loss of students during the semester, however, the number of students included in each analysis decreased from the first to the fourth instructional section.

Complex repeated measures analyses of variance were performed on the percent correct test data for each instructional unit. These analyses permit the following main effect comparisons: (a) time of test (pre- versus post-test performance); (b) test format (aural versus written performance); and (c) musical

background (performance of students with musical backgrounds versus performance of students without musical backgrounds). In addition to testing each of the above main effects, all possible interactions of the main effects were also tested for significance, i.e., time of test by test format, time of test by musical background, test format by musical background, and time of test by test format by musical background.

Module I. The analysis of variance summary for the first instructional section is presented in Table I.

Table I  
Analysis of Variance Summary Table  
Module I

<u>Source of Variation</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>
Between pre- & post-tests (A)	1	65,515.00	250.24*
Between aural & written (B)	1	92,459.00	369.56*
Between students with & without musical backgrounds (C)	1	34,704.00	98.29*
AxB	1	7,735.00	49.64*
AxC	1	5,236.00	20.00*
BxC	1	143.00	<1.00
AxBxC	1	261.00	1.68
Error Terms:			
Students within C	106	353.09	
A x students within C	106	261.81	
B x students within C	106	250.19	
A x B x students within C	<u>106</u>	<u>155.82</u>	
Total	431		

\* $p < .001$

The analysis demonstrates that all main effects and certain interactions are highly significant statistically. Performance on the post-test was considerably improved over pre-test performance, 72.25% items correct as compared to 47.62% correct, respectively. The aural and written tests varied in difficulty with higher scores obtained on the aural portion (74.56% correct) than on the written portion (45.31% correct). Overall performance of students with prior musical training (68.90% correct) was superior to students with no prior musical training (50.97% correct).

The significant interaction of pre- and post-tests by aural and written formats is shown in Figure 1.

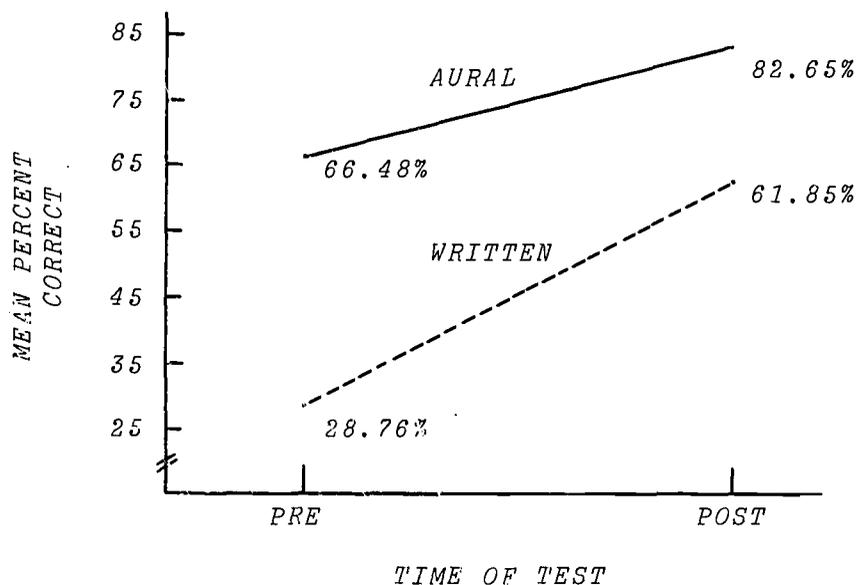


Fig. 1 Interaction of pre- and post-tests by aural and written formats for Module I.

The nature of the interaction suggests that while performance improved from pre- to post-tests for both the aural and written formats, the rate of improvement was significantly greater for the written test. On the pre-test, there was a difference of approximately 38% between the two tests; at the time of the post-test, this difference was reduced to a 21% difference.

There was also a significant interaction between pre- and post-tests by prior musical background of the students. This interaction is illustrated in Figure 2.

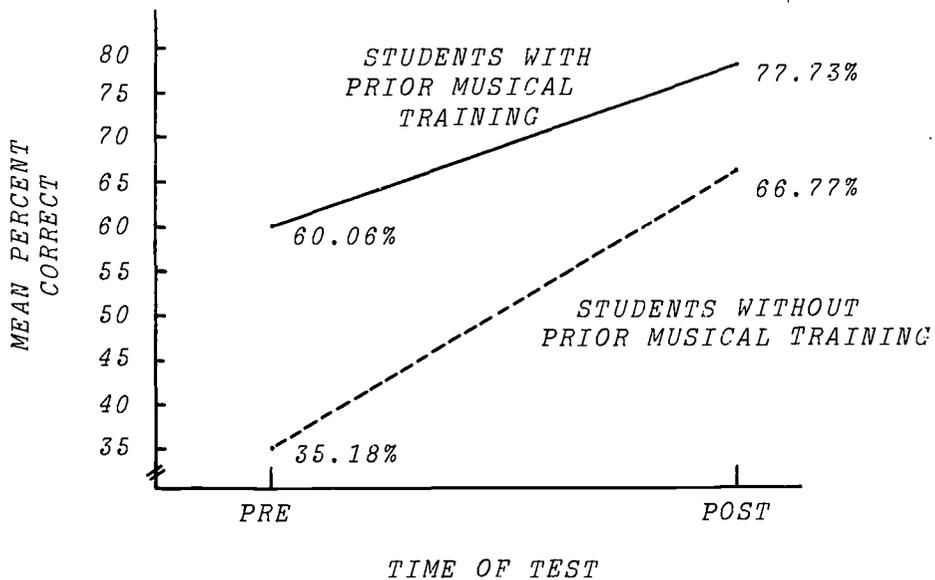


Fig 2 Interaction of pre- and post-tests by musical background of students for Module I.

The above interaction suggests three related points of interest: (a) students in both groups improved their performance from the pre- to the post-tests; (b) the rate of improvement was greater for students without prior musical training, a 31.59% gain versus a 17.67% gain; and (c) the initially large difference between the groups was reduced as a result of the instruction, i.e., the groups were quite dissimilar initially and somewhat homogeneous at the end of the instructional section.

Module II. The results of the analysis of variance on the second instructional section are presented in Table II.

Table II  
Analysis of Variance Summary Table  
Module II

<u>Source of Variation</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>
Between pre- & post-tests (A)	1	439,876.00	1,322.42*
Between aural & written (B)	1	2,413.00	13.92*
Between students with & without musical backgrounds (C)	1	13,013.00	36.38*
AxB	1	20,158.00	159.40*
AxC	1	6,824.00	20.52*
BxC	1	2,311.00	13.33*
AxBxC	1	275.00	2.17
Error Terms:			
Students within C	106	375.70	
A x students within C	106	332.63	
B x students within C	106	173.40	
A x B x students within C	106	126.46	
Total	431		

\*p < .001

All effects which were significant in the first instructional section are again highly significant. In addition, the present analysis suggests a significant interaction of aural and written formats by prior musical backgrounds of the students.

The three significant main effects are revealed in the following comparisons: (a) mean percent correct responses increased from 24.62% on the pre-test to 88.44% on the post-test--a gain of 63.82%; (b) performance was higher on the aural than on the written test, 58.89% correct versus 54.17%--a small but highly significant difference; and (c) students with musical backgrounds performed better than students without musical backgrounds, 62.02% and 51.04%, respectively.

The three significant interactions are presented in Figures 3, 4, and 5. The interpretations of the first two interactions are the same as those presented in the prior analysis, namely, while performance improved for both the aural and the written tests, the performance gain is significantly greater for the written, and, students without previous musical training show greater improvement from the pre- to the post-test than students with previous training.

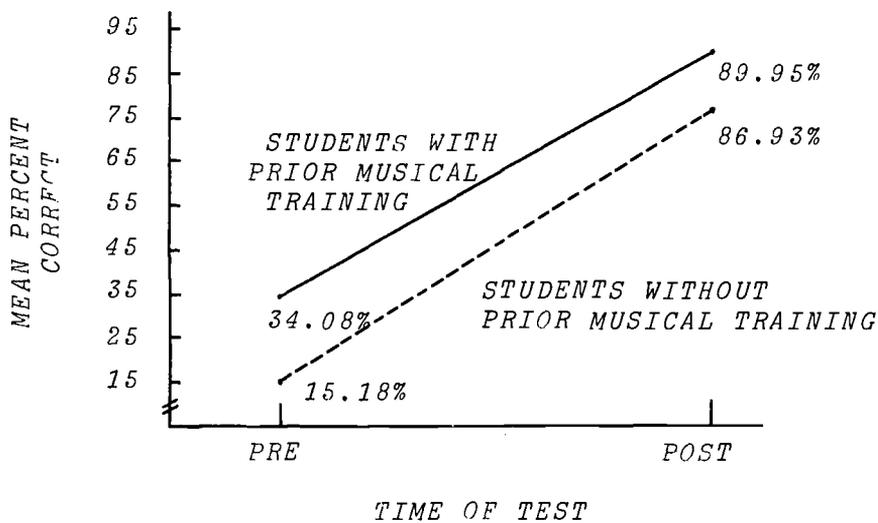


Fig 3 Interaction of pre- and post-tests by musical background of students for Module II.

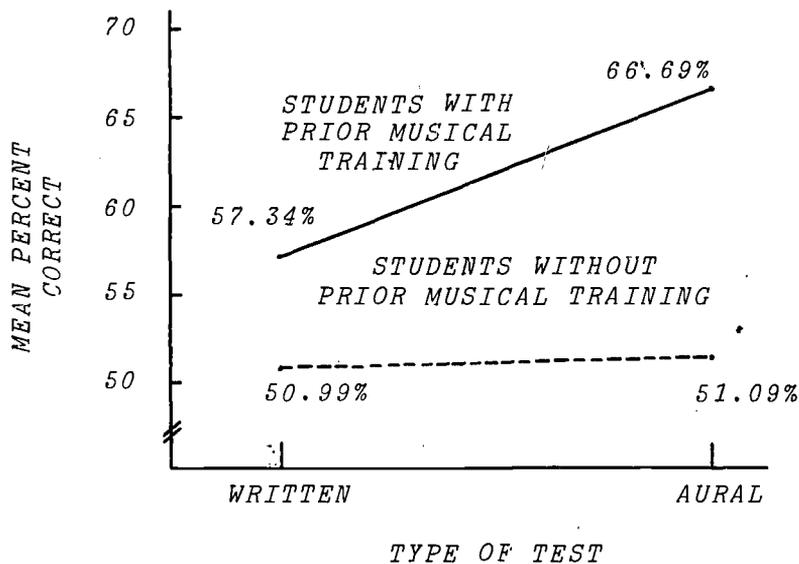


Fig 4 Interaction of written and aural tests by musical background of students for Module II.

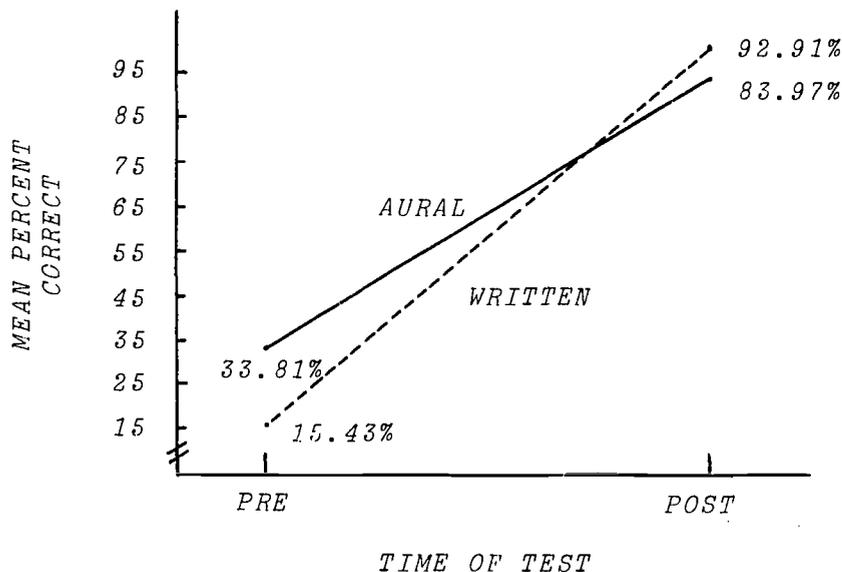


Fig 5 Interaction of pre- and post-tests by aural and written formats for Module II.

The final interaction presented in Figure 5 suggests a somewhat interesting effect. Students with no prior musical training performed similarly on the written and aural tests (50.99% and 51.09%, respectively) while students with prior training did considerably better on the aural than on the written test (66.69% and 57.34%, respectively). Previous musical experience appears to have a greater positive effect on aural as compared to paper-and-pencil type musical skills--at least for the content presented in the second instructional section.

Module III. Table III presents the results for the analysis of variance for the third instructional unit.

Table III  
Analysis of Variance Summary Table  
Module III

<u>Source of Variation</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>
Between pre- & post-tests (A)	1	254,359.00	740.79*
Between aural & written (B)	1	219.00	1.10
Between students with & without musical backgrounds (C)	1	5,427.00	14.53*
AxB	1	29,639.00	178.24*
AxC	1	963.00	2.80
BxC	1	858.00	4.30***
AxBxC	1	1,506.00	9.06**
Error Terms:			
Students within C	104	373.51	
A x students within C	104	343.36	
B x students within C	104	199.49	
A x B x students within C	<u>104</u>	<u>166.29</u>	
Total	423		

\* p < .001

\*\* p < .005

\*\*\* p < .05

In the above analysis, main effects due to pre- and post-test and due to prior backgrounds of the students are highly significant. On the pre-test, the students were correct on 25.47% of the test items and they were correct on 74.46% of the items on the post-test. Students with musical backgrounds scored 53.54% correct and those without musical backgrounds scored 46.39% correct. The main effect due to written versus aural tests is not significant; performance on the written and aural tests was equivalent in the third instructional module.

Significant interactions due to pre- and post-tests by aural and written tests and due to aural and written tests by musical backgrounds of students were again obtained. These interactions are presented in Figures 6 and 7. The interaction of pre- and post-tests by musical background was not significant in this module.

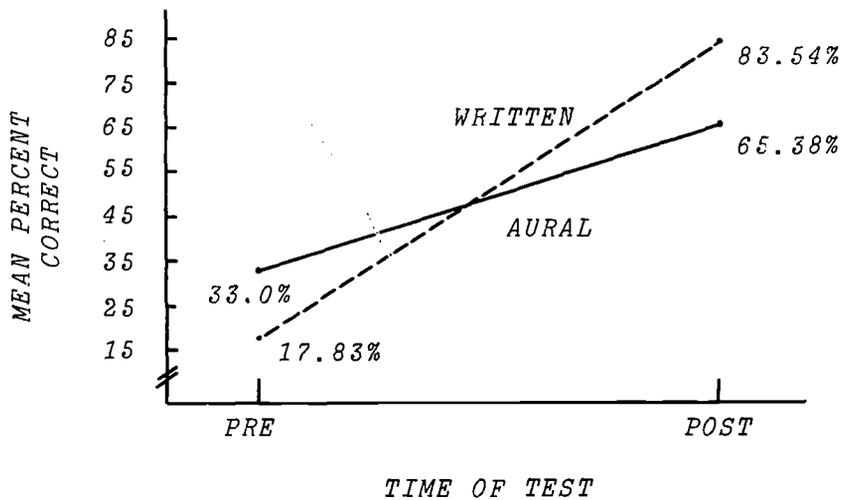


Fig 6 Interaction of pre- and post-tests by aural and written formats for Module III.

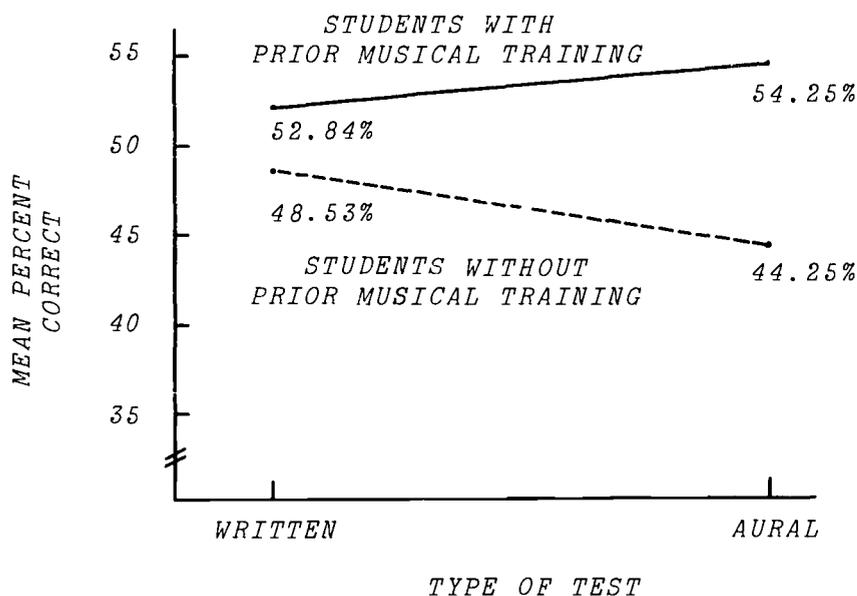


Fig 7 Interaction of written and aural tests by musical background of students for Module III.

Module IV. The analysis of variance for the final instructional section is presented in Table IV.

Table IV  
Analysis of Variance Summary Table  
Module IV

<u>Source of Variation</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>
Between pre- & post-tests(A)	1	315,713.00	865.96*
Between aural & written (B)	1	31,641.00	106.51*
Between students with & without musical back-grounds (C)	1	1,243.00	2.87
AxB	1	36,422.00	100.94*
AxC	1	617.00	1.69
BxC	1	382.00	1.29
AxBxC	1	899.00	2.49
Error Terms:			
Students within C	88	432.94	
A x students within C	88	364.58	
B x students within C	88	297.07	
A x B x students within C	88	360.83	
Total	359		

\*p < .001

Two of the three main effects were again significant: (a) performance increased from 24.12% correct on the pre-test to 82.67% correct on the post-test; and (b) 63.11% of the aural test items were responded to correctly as compared to 44.36% of the written test items. In this fourth instructional unit, students with musical backgrounds did not perform better than students without musical backgrounds. The only interaction which was statistically significant was pre- and post-tests by aural and written tests. This interaction is shown in Figure 8.

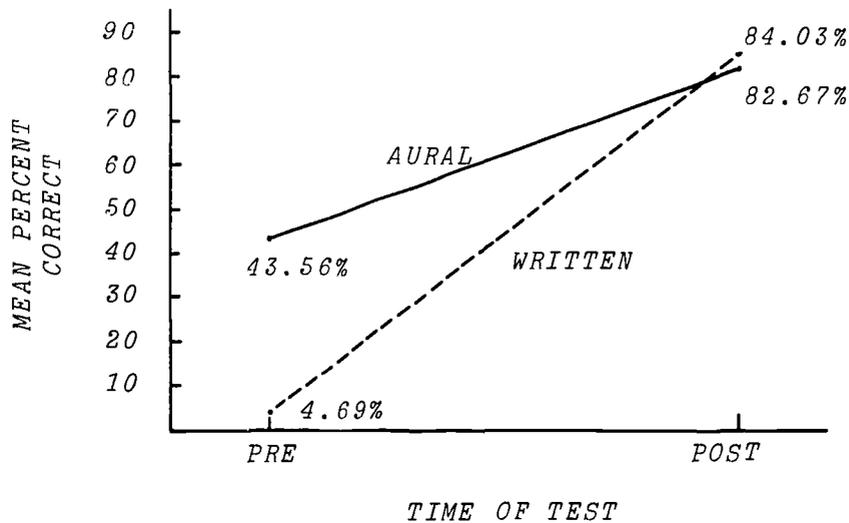


Fig 8 Interaction of pre- and post-tests by aural and written formats for Module IV.

As in all previous instructional sections, the rate of improvement from pre- to post-tests was substantially greater for the written (4.69% correct to 84.03% correct) than for the aural test (43.56% correct to 82.67% correct).

## 2. Study Time and Achievement

As noted earlier, a random sample of 26 students was selected, with the group equally divided between Levels II and III. A tabulation of the number of times each student signed into the laboratory and the length of each visit was tabulated during the 3½ weeks that Module II was being covered. The data generated will be found in Table V.

Correlations. A series of Pearson Product-Moment Correlations were computed within Levels II and III to measure the relationships between: (a) number of visits to the Independent Learning Laboratory (I.L.L.) and number of minutes spent in the I.L.L.; (b) number of minutes and aural grades; (c) number of minutes and written grades; and, (d) aural grades and written grades. The values of these correlations are shown in Table VI.

Table V  
 Independent Learning Laboratory  
 Utilization by Student (Module II)

<u>Student</u>	<u>Level</u>	<u>No. of Visits</u>	<u>Total No. of Minutes</u>	<u>Grade</u>	
				<u>Aural</u>	<u>Written</u>
1	II	7	807	C	A
2	III	4	430	B	A
3	III	8	780	B	A
4	II	5	420	A	A
5	III	10	690	C	A
6	II	6	553	B	C
7	II	6	463	B	C
8	II	4	380	D	A
9	II	4	230	A	A
10	II	5	290	A	A
11	II	2	195	A	A
12	III	4	431	C	C
13	II	5	493	C	A
14	III	7	700	A	A
15	II	7	625	A	B
16	III	4	210	A	B
17	III	8	625	A	B
18	II	7	480	B	B
19	II	3	240	A	A
20	III	3	170	A	A
21	II	3	305	L	A
22	III	4	385	D	B
23	III	8	649	A-	B
24	III	3	220	F	A
25	III	3	250	A-	A
26	III	4	521	A	A
Total		134	11,547		

Average Number of Visits: 5.2  
 Average Total Number of Minutes  
 in Laboratory 442.0  
 Average Length of Stay per  
 Visit, in Minutes 85.0

Table VI  
 Pearson Product-Moment Correlations  
 (N = 13)

	Level II			Level III		
	<u>No. of Minutes</u>	<u>Aural Grades</u>	<u>Written Grades</u>	<u>No. of Minutes</u>	<u>Aural Grades</u>	<u>Written Grades</u>
<u>No. of Visits</u>	.833			<u>No. of Visits</u>	.896	
<u>No. of Minutes</u>		-.170	-.367	<u>No. of Minutes</u>	.238	-.109
<u>Aural Grades</u>			.144	<u>Aural Grades</u>		.147

The only correlations which were significant ( $p < .01$ ) were those between number of visits and number of minutes for both levels.

Independent groups t-tests. To determine whether there were any differences between the students in Levels II and III in terms of number of visits to the I.L.L., number of minutes spent in the I.L.L., and grades-- both aural and written--independent groups t-tests were computed. No differences between the levels approached statistical significance. The mean number of visits for Level II students was 4.92 with a range from 2 to 7 visits; the mean number of visits for Level III students was 5.38 with a range from 3 to 10 visits. Average time spent in the I.L.L. for Level II students was 421-minutes with a range from 195 to 807 minutes while for Level III students the average time was 467-minutes with

a range of 170-780 minutes.

Correlated measures t-tests. Grades on the aural and on the written tests were compared within Level II and Level III. The results of the two t-tests were not significant suggesting equivalent achievement within both levels on both tests.

### 3. Summary of Data Analyses

The results of the above analyses present a fairly consistent picture of student performance across the four instructional sections. In all sections there were very substantial improvements in student performance from the pre-test to the post-test. Performance on the aural test was better than performance on the written test in three of the four sections; there was no difference between these two tests in the third instructional section. Students with previous musical experience performed better than students without previous musical backgrounds in all sections except the fourth; the role of prior experience was a major factor on pre-test performance and relatively minor at the time of the post-test.

With the exception of the interaction of pre- and post-test by aural and written tests, the interactions

do not present consistent findings. In all instructional sections, the performance gain from pre- to post-test was greater for the written than for the aural test. Part of this effect may be due to the very low performance levels consistently demonstrated on the written pre-tests.

Within the first two instructional sections, the rate of performance change from pre- to post-test was significantly greater for students without previous musical experience than for those with such prior experience. The absence of this interaction in the fourth section is primarily due to the absence of an overall performance difference between these two groups of students on the pre-test (therefore, both groups were equally unskilled with regard to the tests given them on popular forms of music!).

The interaction of aural and written tests by musical background of the students was significant in the second and third instructional sections. The nature of these significant interactions differed for the second and the third section; in both sections, students with musical backgrounds performed better on the aural test. Students without musical backgrounds performed equivalently on the aural and written tests in the second section and performed somewhat poorer on the

aural test in the third module.

Time and Achievement. The only significant results were the correlations between the number of visits to the I.L.L. and the number of minutes spent in the I.L.L. These correlations define a linear positive relationship between number of visits and study time which suggests that students who seldom visit the laboratory do not compensate by spending more time per visit.

Within Level II the relationship between total time spent in the laboratory and grades (aural and written) was negative; in general, Level II students who spent relatively more time in the facility did relatively poorer on the aural and written tests. This relationship, however, was not statistically significant. Within Level III, there was a positive relationship between time spent in the laboratory and written grades. These relationships were also not statistically significant. Additional time spent in the laboratory seems only to facilitate the aural performance of students in Level III.

The results of the t-tests indicate that students in Levels II and III were equivalent in terms of number of visits to the I.L.L., time spent at the I.L.L., and in terms of performance on the aural and written tests.

There were no differences between Level II and III students as a function of number of visits, time, or grades.

Within Levels II and III, aural grades were somewhat lower than written grades. Once again, however, the differences were not statistically significant.

#### 4. Student Input

Comments and reactions from students were designed as an integral component of both the developmental and evaluation phases. Student input came, in addition to module pre- and post-tests, from four basic sources.

##### (1) Course Content and Objective Questionnaire

Students enrolled in the traditional course were asked prior to the planning phase of this project, to react to the course as it existed. This included such questions as to strength and weaknesses of the existing course, content areas they would like to see expanded, contracted or included.

##### (2) Error Notification Sheets

Students received in the Student Manual a series of pages marked "Error Notification Sheets" (see example, page 44). Over 100 of these pages were

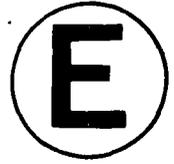
completed and turned in during the course as specific errors in the materials were identified. These comments not only proved invaluable in the revision phase but permitted some critical errors to be corrected immediately. Errors identified ranged from page indication mistakes and missed direction tones on the audio tapes to errors in spelling and omissions on manual pages.

(3) Student Questionnaires

For each of 26 Independent Learning units a student questionnaire was administered to a random sample of from 20 to 30 students. The questionnaire (see example, page 45) was designed to get general reactions to each of the units. Questionnaires were administered for the most part in the Independent Learning Laboratory at the completion of the unit and, as a result, did not cover those assignments completed by most of the students at other locations.

(4) Student Opinionaire

At the end of the fall semester a student opinionaire was administered. This instrument was designed to explore the general reactions of students to the course as a whole and will be found in Appendix C.



ERROR NOTIFICATION

If, in completing one of the assignments for this course, you find an error in spelling, punctuation, directions, or come across another problem such as clarity, please complete this form and turn it over to the proctor at the Independent Learning Laboratory.

Your assistance in helping us improve this course is greatly appreciated.

Thank you.

---

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To: Instructional Resources Center

From: \_\_\_\_\_ (You may leave this blank.)

UNIT TITLE: \_\_\_\_\_ NUMBER: \_\_\_\_\_

Complete where appropriate:

On page number \_\_\_\_\_ I found the following error or problem:

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Student Questionnaire

DATE \_\_\_\_\_

SEQUENCE NO.	TITLE
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To assist us in the evaluation of the sequence you have just completed, we would appreciate your answering the following questions. Thank you.

Dr. Robert M. Diamond, Director  
Instructional Resources Center  
State University College at Fredonia

-----  
*Please check appropriate item.*

1. I felt this sequence was  
 extremely interesting  
 interesting  
 of some interest  
 of little interest  
 boring

2. I felt the material was paced  
 too fast  
 a little fast  
 just right  
 a little slow  
 too slow

3. I felt I learned  
 a great deal  
 some  
 not very much  
 very little

4. I felt this sequence was  
 very clear  
 clear  
 slightly confusing  
 extremely confusing

5. Generally, I would rate this sequence as  
 excellent  
 good  
 fair  
 poor  
 extremely poor

6. My music background prior to this course was  
 extensive (major interest)  
 good (instrument or chorus, etc.)  
 some (two or three courses)  
 very little (one course)  
 none

General Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

a. Student Questionnaire Results

The results, unit by unit, of the student questionnaire for the fall semester will be found in Table VII.

While most units scored well in interest, clarity, and overall ratings, there were exceptions, particularly in Unit 1.6, a multi-screen large group presentation on "Style". (This was later replaced, see Appendix B.) Units 3.12, 3.22, 3.52, and 4.1 also appeared to have some problems in the areas of pacing and clarity.

Table VII

Student Questionnaire Results by Unit

SEQUENCE NUMBER	1.2	1.3	1.4	1.5	1.6	2.13	2.14	2.61	2.62	2.63
I felt this sequence was extremely interesting interesting of some interest of little interest boring	2	1	2	1	-	1	-	4	2	3
	12	12	11	11	5	11	9	15	9	13
	5	7	7	9	8	5	9	1	8	4
	-	-	1	2	4	3	2	-	1	-
	1	-	1	-	4	-	-	-	-	-
I felt the material was paced too fast a little fast just right a little slow too slow	2	-	1	1	13	1	3	-	-	-
	7	8	8	6	5	7	8	5	1	2
	10	10	10	12	3	11	8	15	17	18
	1	2	3	3	-	-	1	-	2	-
	-	-	-	-	-	-	-	-	-	-
I felt I learned a great deal some not very much very little	6	5	7	2	2	6	6	5	3	6
	12	14	10	15	7	13	12	15	17	14
	1	1	4	5	7	1	2	-	-	-
	1	-	1	-	5	-	-	-	-	-
I felt this sequence was very clear clear slightly confusing extremely confusing	3	11	10	10	-	1	-	5	4	4
	11	9	7	9	3	12	11	12	12	13
	5	-	4	4	7	7	9	2	4	2
	1	-	1	-	11	-	-	-	-	1
Generally, I would rate this sequence as excellent good fair poor extremely poor	3	1	2	2	-	2	-	5	4	4
	10	14	13	10	6	9	11	12	9	14
	5	5	6	10	6	8	9	3	7	1
	2	-	1	-	7	1	-	-	-	1
	-	-	-	-	2	-	-	-	-	-

Table VII

Student Questionnaire Results by Unit

SEQUENCE NUMBER	3.1	3.12	3.21	3.22	3.51	3.512	3.52	3.53	3.53I	3.61	3.62	3.63
I felt this sequence was extremely interesting interesting of some interest of little interest boring	4	2	-	-	3	4	2	1	1	2	2	1
	11	16	17	13	16	15	7	16	10	14	12	15
	5	6	11	13	10	8	13	11	13	13	12	9
	-	6	1	3	1	1	5	1	4	1	4	5
	-	-	1	1	-	2	3	1	2	-	-	-
I felt the material was paced too fast a little fast just right a little slow too slow	-	-	2	4	-	2	5	1	1	-	-	-
	3	1	4	6	1	6	4	1	21	22	2	4
	13	24	21	18	26	16	18	24	9	5	21	24
	4	3	1	2	3	4	3	4	1	2	4	2
	-	2	2	-	-	1	-	-	-	1	3	-
I felt I learned a great deal some not very much very little	8	6	10	6	17	9	4	8	3	5	6	8
	12	15	19	20	11	19	15	18	18	22	21	21
	-	6	1	1	2	1	3	3	8	2	2	1
	-	3	-	3	-	1	-	1	1	1	1	-
I felt this sequence was very clear clear slightly confusing extremely confusing	6	11	9	4	20	6	5	2	6	5	5	5
	12	18	16	12	10	18	10	25	22	21	21	20
	2	1	5	10	-	5	10	3	3	4	4	5
	-	-	-	4	-	1	5	-	-	-	-	-
Generally, I would rate this sequence as excellent good fair poor extremely poor	5	3	2	2	8	2	1	1	-	3	2	2
	11	14	18	11	16	16	7	15	13	15	17	14
	4	12	9	13	5	11	12	13	13	11	10	10
	-	1	1	3	1	-	7	1	4	1	1	4
	-	-	-	1	-	1	3	-	-	-	-	-

Table VII

Student Questionnaire Results by Unit

SEQUENCE NUMBER	4.1	4.2	4.3	4.4	4.62II
I felt this sequence was extremely interesting interesting of some interest boring	5	5	6	2	10
	12	7	10	14	5
	6	10	5	9	1
	-	2	3	1	-
I felt the material was paced too fast a little fast just right a little slow too slow	5	1	1	1	1
	8	7	9	11	5
	10	12	13	12	9
	1	2	-	1	1
	-	1	1	-	-
I felt I learned a great deal some not very much very little	8	4	7	5	10
	11	10	16	20	5
	3	9	-	1	1
	2	1	1	-	-
I felt this sequence was very clear clear slightly confusing extremely confusing	-	3	3	1	5
	16	14	16	14	8
	7	6	4	11	3
	2	-	1	-	1
Generally, I would rate this sequence as excellent good fair poor extremely poor	1	1	5	1	5
	13	10	8	14	8
	8	10	8	11	2
	3	2	1	-	1
	-	1	1	-	-
My music background prior to this course was extensive (major interest) good (instrument, etc.) some (2 or 3 courses) very little (1 course) none	1	1	-	-	3
	15	12	6	14	6
	1	2	2	2	1
	2	2	3	2	1
	6	7	12	7	5

b. Student Opinionaire Results

1. I find this course to be exceptionally well rganized; subject matter in agreement with clearly defined course objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	7	7	1	25	4	9	2	4
Simply agree	38	38	2	50	18	41	18	35
Uncertain/no opinion	14	14	1	25	6	14	7	13
Disagree	32	32			10	23	22	42
Strongly disagree	9	9			6	14	3	6

2. The examinations so far are valid tests of the course material.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	17	17	1	25	11	25	5	10
Simply agree	50	50	3	75	21	48	26	50
Uncertain/no opinion	8	8			2	5	6	12
Disagree	21	21			8	18	13	25
Strongly disagree	4	4			2	5	2	4

3. The course grades were, in general, based on valid evidence of achievement.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	14	14	1	25	7	16	6	12
Simply agree	34	34	3	75	17	39	14	27
Uncertain/no opinion	26	26			10	23	16	31
Disagree	25	25			10	23	15	29
Strongly disagree	1	1					1	2

4. I find the list of objectives found in the manual for each unit very helpful.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	32	32	3	75	15	34	14	27
Simply agree	45	45	1	25	21	48	23	44
Uncertain/no opinion	13	13			4	9	9	17
Disagree	9	9			3	7	6	12
Strongly disagree	1	1			1	2		

5. I find the Independent Learning materials for Module I, Introduction and Prerequisites, are very reasonable in terms of length and difficulty.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	6	6	1	25	3	7	2	4
Simply agree	20	20	1	25	10	23	9	17
Uncertain/no opinion	2	2			1	2	1	2
Disagree	41	41	1	25	1	48	19	37
Strongly disagree	31	31	1	25	9	20	21	41

6. I find the Independent Learning materials for Module II, Instrumental forms, are very reasonable in terms of length and difficulty.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	4	4	2	50	1	2	1	2
Simply agree	27	27	2	50	10	23	15	29
Uncertain/no opinion	18	18			6	14	12	23
Disagree	43	43			22	50	21	41
Strongly disagree	8	8			5	11	3	6

7. I find the Independent Learning Materials for Module III, Vocal Forms, are very reasonable in terms of length and difficulty.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	2	2			2	5		
Simply agree	19	19			8	18	11	21
Uncertain/no opinion	19	19	2	50	6	14	11	21
Disagree	44	44	2	50	22	50	20	38
Strongly disagree	16	16			6	14	10	19

8. I find the Learning Materials for Module IV, Today, are very reasonable in terms of length and difficulty.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	24	24	1	25	10	23	13	25
Simply agree	52	52	1	25	24	55	27	52
Uncertain/no opinion	7	7			4	9	3	6
Disagree	14	14	2	5	6	14	6	12
Strongly disagree	3	3					3	6

9. I find the Independent Learning Units for Module I well organized; subject matter in agreement with clearly defined course objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	5	5	1	25	3	7	1	2
Simply agree	43	43	2	50	24	55	17	33
Uncertain/no opinion	20	20	1	25	8	18	11	21
Disagree	23	23			7	16	16	31
Strongly disagree	9	9			2	5	7	13

10. I find the Independent Learning Units for Module II well organized; subject matter in agreement with clearly defined course objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	11	11	4	100	6	14	1	2
Simply agree	53	53			21	48	32	62
Uncertain/no opinion	20	20			10	23	10	19
Disagree	14	14			7	16	7	13
Strongly disagree	1	1					1	2

11. I find the Independent Learning Units for Module III well organized; subject matter in agreement with clearly defined objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	7	7			4	9	3	6
Simply agree	51	51	3	75	22	50	26	50
Uncertain/no opinion	13	13			6	14	7	13
Disagree	25	25	1	25	11	25	13	25
Strongly disagree	4	4			1	2	3	6

12. I find the Independent Learning Units for Module IV well organized; subject matter in agreement with clearly defined objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	16	16	1	25	6	14	9	17
Simply agree	48	48	1	25	21	48	26	50
Uncertain/no opinion	13	13			8	18	5	10
Disagree	17	17	2	50	7	16	8	15
Strongly disagree	6	6			2	5	4	8

13. There is adequate opportunity for personal attention in this course.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	10	10			1	2	9	17
Simply agree	35	35	2	50	14	32	19	37
Uncertain/no opinion	29	29	2	50	15	34	12	23
Disagree	16	16			8	18	8	15
Strongly disagree	10	10			6	14	4	8

14. My general interest in Music is increasing as a result of my enrollment in this course.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	20	20	2	50	6	14	12	23
Simply agree	42	42			18	40	24	46
Uncertain/no opinion	23	23	2	50	11	25	10	19
Disagree	10	10			6	14	4	8
Strongly disagree	5	5			3	7	2	4

15. The material presented in the Independent Learning Units for Module I is interesting.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	5	5			2	5	3	6
Simply agree	22	22	4	100	9	20	9	17
Uncertain/no opinion	20	30			10	23	10	19
Disagree	31	31			15	34	16	31
Strongly disagree	22	22			8	18	14	27

16. The material presented in the Independent Learning Units for Module II is interesting.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	12	12	2	50	5	11	5	10
Simply agree	38	38	2	50	15	34	21	40
Uncertain/no opinion	24	24			14	32	10	19
Disagree	21	21			6	18	13	25
Strongly disagree	5	5			2	5	3	6

17. The material presented in the Independent Learning Units for Module III is interesting.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	9	9			4	9	5	10
Simply agree	47	47	4	100	22	50	21	40
Uncertain/no opinion	19	19			8	18	11	21
Disagree	20	20			8	18	12	23
Strongly disagree	5	5			2	5	3	6

18. The material presented in the Independent Learning Units for Module IV is interesting.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	50	50	2	50	19	43	29	56
Simply agree	40	40	2	50	23	52	15	29
Uncertain/no opinion	6	6			2	5	4	8
Disagree	1	1					1	2
Strongly disagree	3	3					3	6

19. The material presented in the Independent Learning Units for Module I is informative.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	20	20	4	100	8	18	8	15
Simply agree	48	48			22	50	26	50
Uncertain/no opinion	12	12			7	16	5	10
Disagree	13	13			6	14	7	13
Strongly disagree	6	6			1	2	5	10

20. The material presented in the Independent Learning Units for Module II is informative.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	17	17	3	75	5	11	9	17
Simply agree	66	66	1	25	32	73	33	63
Uncertain/no opinion	11	11			5	11	6	12
Disagree	5	5			1	2	4	8
Strongly disagree	1	1			1	2		

21. The material presented in the Learning Units for Module III is informative.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	18	18	2	50	6	14	10	19
Simply agree	62	62	2	50	29	66	31	60
Uncertain/no opinion	14	14			6	14	8	15
Disagree	5	5			2	5	3	6
Strongly disagree	1	1			1	2		

22. The material presented in the Independent Learning Units for Module IV is informative.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	33	33	2	50	9	20	22	42
Simply agree	52	52	1	25	28	64	23	44
Uncertain/no opinion	8	8	1	25	4	9	3	6
Disagree	4	4			3	7	1	2
Strongly disagree	3	3					3	6

23. The material presented in the Independent Learning Units for Module I is presented clearly.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	15	15	2	50	6	14	7	13
Simply agree	31	31			19	43	12	23
Uncertain/no opinion	13	13			5	11	8	15
Disagree	29	29	2	50	12	27	15	29
Strongly disagree	12	12			2	5	10	19

24. The material presented in the Independent Learning Units for Module II is clearly presented.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	10	10	3	75	3	7	4	8
Simply agree	43	43	1	25	20	45	22	42
Uncertain/no opinion	27	27			13	30	14	27
Disagree	16	16			7	16	9	17
Strongly disagree	4	4			1	2	3	6

25. The material presented in the Independent Learning Units for Module III is clearly presented.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	10	10			5	11	5	10
Simply agree	39	39	2	50	15	34	22	42
Uncertain/no opinion	22	22	2	50	11	25	9	17
Disagree	25	25			10	23	19	29
Strongly disagree	4	4			3	7	1	2

26. The material presented in the Independent Learning Units for Module IV is clearly presented.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	20	20	1	25	4	9	15	29
Simply agree	45	45	1	25	24	55	20	38
Uncertain/no opinion	14	14			6	17	8	15
Disagree	13	13	2	50	6	17	5	10
Strongly disagree	8	8			4	9	4	8

27. In general, my attitude toward this course is very positive.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	12	12	2	50	6	14	4	8
Simply agree	43	43	2	50	19	43	22	42
Uncertain/no opinion	21	21			9	20	12	23
Disagree	17	17			8	18	9	17
Strongly disagree	6	6			2	5	4	8

28. I have found the seminars to be exceptionally well organized; subject matter in agreement with clearly defined course objectives.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	6	6			3	7	3	6
Simply agree	28	28	3	75	9	20	16	31
Uncertain/no opinion	27	27			17	39	10	19
Disagree	29	29	1	25	10	23	18	35
Strongly disagree	9	9			4	9	5	10

29. I find the seminars to be extremely helpful in answering questions that I have.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	7	7			3	7	4	8
Simply agree	34	34	2	50	14	32	18	35
Uncertain/no opinion	26	26	2	50	13	30	11	21
Disagree	32	32			13	30	19	37
Strongly disagree	1	1			1	2		

30. I strongly support the concept of having live performers in the seminars.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	71	71	3	75	31	70	37	71
Simply agree	26	26	1	25	13	30	12	23
Uncertain/no opinion	1	1					1	2
Disagree	1	1					1	2
Strongly disagree								

31. I find the amounts of time required for this course to be reasonable.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	5	5	2	50	3	7		
Simply agree	17	17	1	25	7	16	9	17
Uncertain/no opinion	11	11			7	16	4	8
Disagree	38	38			13	30	24	46
Strongly disagree	29	29			14	32	15	29

32. I strongly support the redesign of other courses along the lines of independent study.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	20	20	1	25	9	20	10	19
Simply agree	40	40	2	50	18	40	20	38
Uncertain/no opinion	19	19	1	25	9	20	9	17
Disagree	8	8			4	9	4	8
Strongly disagree	13	13			4	9	9	17

33. As a result of this course, I would like to take additional courses in Music if they are offered.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	24	24	2	75	14	32	7	13
Simply agree	22	22	1	25	9	20	12	23
Uncertain/no opinion	27	27			13	30	14	27
Disagree	14	14			3	7	11	21
Strongly disagree	13	13			5	11	8	15

34. If a course in another subject were being offered in the traditional lecture format and in the format used in this course, I would strongly prefer the format of Independent Study.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	26	26	2	50	10	23	14	27
Simply agree	35	35	1	25	20	45	14	27
Uncertain/no opinion	22	22			9	20	13	25
Disagree	8	8	1	25	1	2	6	12
Strongly disagree	7	7			3	7	4	8

35. I would prefer that this course remain as a one semester offering rather than two semesters of greater breadth and depth.

	Total		Levels					
	n	%	I		II		III	
			n	%	n	%	n	%
Strongly agree	21	21			11	25	10	19
Simply agree	29	29			14	32	15	29
Uncertain/no opinion	20	20	1	25	9	20	10	19
Disagree	13	13	2	50	5	11	6	12
Strongly disagree	15	15	1	25	4	9	10	19

c. Representative Student Comments

*This is the way this type of course should be taught. Lectures and readings don't give a true feeling of music.*

*Dial access seldom worked right. Tapes should be available for all units. (NOTE: As a result of student comments, copies of all materials on the dial access system were placed in the Independent Learning Laboratory.)*

*This is the only course that has held my interest in Fredonia. I like the independent study concept. I really think that this course helped me to decide to become a music major. I liked this course too much to not have any more music.*

*As one who took MU215 last year and withdrew I can objectively say that the improvement is remarkable.*

*Of all the courses I have taken this far this is the most well-organized and one of the most relevant. This course was not narrow in limiting the subject matter to music but served to make the material covered applicable to a basic understanding of the modern world.*

*I feel that this course was a little beyond my level of music.*

*The course as a whole was very good. I felt my appreciation for music has expanded greatly . . . I would like to see more courses on this type of study. Also I feel this should be a full year course. There is much too much material to cover in one semester and there were so many areas I would have liked to see covered more in depth!*

*The course was enjoyable, but the amount of time it took to do the beginning modules was unbelievable.*

*I feel that if the course were to remain unchanged it should become a four credit hour course because of amount of time to complete each unit.*

*I like the way the course has been set up with independent study. I found that there wasn't any pressure on me and I had more desire to do the work on my own.*

*On the whole, I can say that I have enjoyed parts of this course and disliked others. I have learned new things and been exposed to different kinds of music. But I think that there is a little too much independent study.*

*As I went through this course I swore up and down. Now that I've completed it, I feel it was very worthwhile.*

More live performances relating to units could be added.

The course was good in that you could do the lessons when you wanted, stop the tape or repeat it when you wanted.

I would have really enjoyed a much wider listening of musical periods, etc., more so along the traditional--Bach, Debussy. I did, however, enjoy the course immensely and hope it will be continued.

I very much liked the independent study approach and the options offered.

I feel the booklets help you to learn and retain more. You don't tend to daydream as much.

Greatest advantage--positive exposure to a great deal of different kinds of music--letting student investigate areas that interest him. I still remember the tape-slide sequence vividly.

I would prefer this, and other courses to be offered in traditional lecture format.

I would have enjoyed this course more if I hadn't felt I was constantly being pushed to run a race between where I live and the Independent Learning Laboratory. I feel musical attitudes are something that should be digested slowly, allowing an individual to enjoy each experience, they aren't so much garbage that can be crammed into you. If I hadn't had any previous musical background I would probably become quite discouraged. However, I was used to spending considerable time listening to many kinds of music. The one thing that I am extremely impressed with in this course is the tremendous amount of time and effort that must have gone into the organization of it. Few professors are willing to attempt a new approach. I respect this method very much, and despite any criticism I feel this was an excellent experience in music.

The Chapman book (Essentials of Music) was depressing. The seminars with live performers and audio and visual aids were great . . . some units were too long. This course really kept me interested after Module I. Module IV was the best. Enthusiasm of the professor helped spark enthusiasm in students.

Some of the Module lab assignments were too long for the time I had.

This course was more challenging than I expected. Seminars were essential in that they reviewed somewhat what I had studied in independent study and what I had missed in the lab.

Although this course took up a lot more time than other classes--I liked it.

This course is set up in an excellent manner, but the amount of listenings and required readings should be cut down.

I really enjoyed the last section ("Today") and wish I could have had more time to go into it.

I enjoyed this course more than any other. I really wish there were another course available.

I feel independent study is extremely helpful in learning the material. However the length of some units (when studied seriously) was extremely time consuming. Even though I had taken a musical instrument, my musical background was poor. Things that were fed to me (scales, etc.) were learned without understanding behind them. This course has explained many of the whys. I think the greatest personal accomplishment was awareness. Even though I'm not proficient in knowledge about fugues or operas I at least have some basics I can always use. I never realized how much music plays a part in our lives . . . I have enjoyed the course.

I enjoyed the course and find I now listen more carefully to classical music.

This course has very great possibilities and I feel within a couple of years it will be one of the best types of courses offered. The use of the independent lab provided much more listening material and allowed the student to become familiarized with the materials. At present, the first three modules are very much too long which only serves to disinterest the student. However, the tests were fair and with revisions, this course has excellent possibilities.

The subjects covered were interesting, and I enjoyed studying them--except for the first module. I only think that they should be shortened some in length. Stating the objectives really helps. The questions in the booklets do help.

A new experience--glad I took the course.

I feel that the independent learning was a fantastic idea; however, there are parts that still need to be ironed out. Some of the tapes were much too long and they could have stuck more closely to the objectives.

I liked the course very much. It was quite interesting and not limited. You got quite a broad background of things not even having to do specifically with music. I like that.

*The amount of time required for this course is absolutely ridiculous. Other courses do indeed exist . . . you do not seem to realize this. This course is in music appreciation, not music hatred.*

*The first module was confusing, but in time I caught on. I enjoyed the independent study format and would like to see it continued in other courses. Live performances were very helpful.*

*Basically, I like the course and would encourage others to take it.*

*This course has increased the enjoyment of listening to music for me. I hear things I never did before.*

*I think that the course is good and I like independent study . . . the time spent on it seems long but because there are no classes all the time, it averages out in the end. I think the behavioral objectives are good because they tell you what is the most important material.*

*I find the course very interesting and informative. However, the seminars are not long enough to cover everything that should have been reviewed. I do not know though, whether I would have wanted longer ones. Study lab should be open more hours . . . Sundays and Friday nights.*

## 5. Instructor Comments

In general this project has proved itself to be a viable means of approaching musical instruction for non-majors and non-performers. Aside from individual tutoring, I feel that no other system has proved as effective in meeting the individual backgrounds, interests, abilities and needs of the various students who elect to take such a course. On the other hand, no other system has appeared to be as effective in the efficient and effective use of faculty time in meeting individual concerns, while at the same time dealing in a more humanistic manner with large group instruction and insuring a high quality of instruction.

### Advantages and Strengths

1. The highest quality of instruction is insured by the use of faculty specialists from several universities, including other faculty here at Fredonia not actually teaching the course, to develop independent study sequences in their own areas of specialty. This saves a survey or introductory course from being so general as to be misleading, and makes best possible use of faculty time and talent.

2. The independent study sequences enable each student to work on the material individually, at his or her own rate of speed, and according to his or her own background, abilities, and interests. In addition to a core syllabus followed by everyone in the course, significant portions of the course are available as student options; thus, in effect, there are times when students can "major" in an area of music which most interests them or which most serves their own personal needs or collegiate programs. Of all the features of this course, this was the most essential and, I believe, the most significant in terms of course success.
3. The use of a systems approach for implementing the pilot project, the experimental semester, and the revised semester, also proved to be of inestimable value to me as I attempted to perfect and continually improve instruction and therefore learning. In essence this approach involved pre-testing--instruction (mostly independent, some group)--post-testing. The results of the post-tests, when compared with achievement on the pre-tests served as clear

indices of areas and items in the instructional sequences which needed attention, revision, inclusion or deletion. Other sources of student feedback in the form of questionnaires, opinionnaires, and individual evaluation by students of the independent and group instruction, were also used to provide me with additional information for improving the effectiveness of instruction.

On the basis of the feedback provided by this systems approach, considerable revisions were made for the second implementation of the course in the spring semester of 1971 (Appendix B). These changes were started in the 5th and 6th weeks of the first semester as the results of the success and effectiveness of instruction during the experimental semester became known. Thus revision, updating and improvement were built-in factors, and if continually implemented, the course should remain "alive" and viable. The intent is to avoid the development of a static accumulation of instructional materials.

4. As this course was organized into four modules of 3½ weeks in length, each of which was subdivided into separate and self-contained units, the materials developed for this course are readily usable in:

- a. other music courses whose content touches on the same areas. Even music majors profit from the broad and general view given them in distinction to the atomization which can result from specializing in "tool skills".<sup>4</sup>
- b. similar courses at other institutions, including public schools.

The self-contained nature of these materials make it possible for them to be arranged and used as best suits the needs or intent of the teacher or institution wishing to adopt them. Similarly, they can then develop similar materials to meet needs specifically unique to their situations. This is of especial value when or where teachers

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<sup>4</sup>Music education majors found the portions on the "youth music" of today most helpful. They studied this material independently before beginning their practice-teaching. This was their only for a contact with this material in their training and proved a valuable in their practice-teaching experience.

for such courses are assigned on a rotational or semi-permanent basis by insuring continuity and "quality control" while at the same time admitting the element of personal preference.

5. The development of branching program texts, coordinated with linear and branching aural tapes accomplished a feat heretofore unmanageable in musical instruction: the immediate association of the fact, skill or concept with an aural experience to which it related. Thus the musical art, as an aural art, can be taught in such a way as to insure constant transfer of learning to aural situations. The programming and/or self-tests accompanying such instruction permit the student to constantly monitor and evaluate his or her own progress. This avoids the situation where failure to make progress is discovered only on periodic or final exams (when it is often too late to do anything remedial about it).

A secondary advantage of this new development is that all listening can be guided or directed listening wherein the student is given both the means and the manner for undertaking significant

listening practice and experience. They, in essence, are told what to listen to or for in the musical examples and given the means for assessing whether or not they were successful in fulfilling the listening experience. Where possible or practical, remedial processes are recommended for those whose progress has not been satisfactory.

6. The use of pre-stated behavioral objectives (wherein all learning is stated in terms of behavior, changes in the frequency of behavior, or transfer of behavior to new circumstances) provided:

a. ready means of evaluating student progress and the effectiveness of instruction by in each case, comparing the student's achievement with the objectives stated in advance.

b. increased focus of student efforts, thereby increasing efficiency and effectiveness in their study. There was little confusion as to exactly what was to be learned or accomplished in each facet of the course. Studying

for the periodic tests basically involved making sure one had met all of the behavioral objectives for the portion of the course under consideration.<sup>5</sup>

- c. Additionally, students who by means of the pre-stated objectives became aware of their inability to accomplish what was required, could then contact the instructor for personal attention and/or tutorial help assigned by him, in the form of assistance by seniors and graduate students in Music Education.

7. The combined use of pre-stated behavioral objectives, and the independent study format permits student motivated review at all times throughout the course. The booklets and tapes may be reviewed separately or together depending on the student's need for progress with regard to the pre-stated objectives. Similarly, students who for reasons of health,

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<sup>5</sup>See page 78 for a problem connected with the use of behavioral objectives.

etc. miss a considerable portion of the course, may make up this work (even in another semester, during vacations, etc.) by going through the missed materials.

8. By relegating the dissemination of information, cognitions and skills to an independent study format, the teacher is then free to use live class time in astoundingly new and effective ways.

- a. large groups can then be divided up into smaller groups and seminars (which conceivably can be handled by a number of different faculty according to need, specialty, or interest).
- b. live music became an integral part of almost all group meetings regardless of size.
- c. the teacher is free to deal with music per se rather than having to lecture or demonstrate information and other learnings about music. Thus classes involve only the study of music, plus any review or refinement of the independent study materials that may be

encouraged by class interest or questions.

9. Students prefer to be treated as adults by being given the opportunity for choice, for independent study, and to progress according to their own needs. While they may be, from time to time, un-nerved by the self-discipline required in a course of this nature, they appreciate and commend the opportunity even when they don't always take advantage of it. I anticipate that any proliferation of this kind of approach into secondary and higher education would help alleviate any difficulties which arise in this way.

#### Problems and Areas for Improvement

1. Those considering developing courses of this nature which enlist the assistance of diverse faculty from diverse institutions must, in advance, attempt to develop the means for reconciling differences of scholarly or personal opinion between such authors or developers, and the instructor who must face the students in person. If possible the most satisfactory method would exist where the

instructor is competent to oversee the general organization and direction of such cooperative efforts and where he or she has been invested with the requisite decision-making authority in advance and known to all prospective participants.

2. The factor of time is perhaps the most crucial in the development of courses of this nature. Ample time must be allotted for the comfortable and sane development of any new materials, etc. as will be needed. The preponderance of the course should be a *fait accompli* before the time is due for implementation. While there are certain advantages to simultaneous development of latter portions of the course while the earlier portions are implemented (e.g. feedback may indicate revisions at even this early a date), none of these advantages are in any way obviated by having a solid version of the course ready to go the first day of class (e.g. then the use of feedback is one of revision rather than initial development). Increase the amount of time needed for

development in direct ratio to:

- a. anticipated amount of locally developed materials.
  - b. available production staff (including typists, etc.).
  - c. the number of faculty cooperatively participating and the distance of same from the college doing the developing (revisions through the mails can be maddening!).
3. Time is also important with regard to student efforts. The factor most in need of continual scrutiny on our part has been the amount of time required to successfully complete the independent study materials plus the added time spent in class. Ideally, total student time should not exceed local standards (here a three hour course involves three class hours, plus six hours outside class, adding up to a maximum total of nine hours of student involvement per week with the course) and every precaution must be instituted to continually monitor and evaluate how much time the class is actually using (not how much they say they are using).

Best possible use of student time will be had if the students are taught how to correctly use behavioral objectives and frequently reminded to use them. At first students were observed reading and taking notes (!!) from the programmed booklets, thus spending considerably more time by outlining a lot of explanatory material and examples.

The best course of action which developed was to proceed through the programmed materials as directed, then to return (then or later) to the sequence and take notes using the behavioral objectives as a guide. Other personal information (titles of compositions, etc., could also be recorded at this time). These study notes, plus the booklet and tapes, should then be used for review (see page 94 also).

Our experience has been that a course of this type can, if well thought out in advance and controlled, make full or as much use of student time as the instructor wishes: this, as discovered in this project, is seldom done in

courses of the traditional sort.<sup>6</sup>

But student opinion must be considered, even when misguided in this regard. If the class as a whole is disenchanted with the total amount of time required, even if within the parameters pre-stated and understood, negative attitudes will invariably affect the effectiveness of instruction. This, however, is a matter of opinion more than anything else, which must be specifically dealt with before any development of materials or study-sequences is undertaken.

4. Evaluations in projects of this sort should be done in cooperation with individuals not directly involved or in a position to gain from the success of the project. Having a specialist in research design and evaluation involved proved extremely beneficial as this project developed. Aside from assuring less adventuresome local faculty of the efficacy of a successful project, much is to be said in the same regard for faculty in the same

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<sup>6</sup> See pages 37-40, 42-43 supra for an analysis of a sample of student time-involvement in independent study.

discipline elsewhere. In general, a more objective tone is possible; and feedback in the systems approach, aside from being derived by means of more or less subjective behavioral objectives, must be objectively gathered, appraised and used. Any and all efforts in this direction will improve the effectiveness of the system, thereby insuring quality and success as continual co-travelers, while at the same time protecting the participants from misguided criticisms from wary colleagues within the discipline.

5. If locally developed materials are to be created, it would be most useful for all the individuals involved to agree beforehand on procedures and questions concerning copyright, rights to any profit which might accrue. Use of the materials be it individuals within or outside of the group for instructional or experimental purposes, should also be clarified in advance.

## VII. Project Costs

This project began officially in January 1970 with the

first formal meeting of the advisory committee and followed the following sequence:

January - May 1970

- a. Identification of course objectives
- b. Identification of instructional components
- c. Formulation of formal course design

June - August 1970

- a. Production of instructional components
- b. Design of evaluation instruments
- c. Preparation of Student Manual

September 1970 - January 1971

- a. Implementation
- b. Evaluation
- c. Completion of remaining instructional components, Student Manual and evaluation instruments
- d. Revisions began for second semester

February - May 1971

- a. Revised course offered and evaluated
- b. Revisions continued
- c. Student manual adjusted for fall semester

For the purpose of this report, costs will include the period from January 1970 through January 1971; a thirteen month period that includes one complete field test and

evaluation sequence, plus some revision.

Support funds came from two primary sources: (a) two grants of \$1,777 and \$8,782 provided by the Educational Communications Office, State University of New York, and (b) operating funds of the Instructional Resources Center. In addition to the regular teaching assignment for the course, some release time was provided by the Music Department with several faculty at Fredonia and other units assisting on the project above their normal teaching assignments without compensation.

An attempt has been made to present an accurate cost picture by including the pro-rated salaries of all those who assisted on the project and who are regularly employed by the Instructional Resources Center to support projects of this type. In reviewing the material the reader should, however, keep in mind that the percentage of time full-time staff have spent on this particular project are approximations. The cost figures cover both the purchase and production of all media utilized in the course with the exception of the two television segments, one of which was not used during the first semester.

Not included are items purchased by the student (text, scores, etc.), books and records purchased by and placed on reserve by the Library. However, the list does include

scores and texts purchased and placed in the Independent Learning Laboratory as parts of the formal sequence.

Approximate Project Costs\*  
(13 Month Period)

Personnel

Project Director (course development, coordination, faculty in-service training & material editing)	\$5,500
Coordinator of Evaluation (does not include additional time donated to project)	300
Faculty	
Release Time (above regular 3-hour instructional load)	4,000
Summer Employment and Overload	8,000
Advisory Committee (all expenses)	600
Audio Technician	1,600
Graphics & Photography	
Supervision/Coordination	450
Graphic Artist	1,950
Photographer	875
Student Assistants (evaluation)	325
Clerical (professional & student)	<u>2,750</u>
<u>Total:</u>	<u>\$26,350</u>

\* Includes cost of preparing and duplicating the Student Manual given to students during the fall semester only. Does not include regular academic load and operation of on-going Independent Learning Laboratory and dial access system.

Approximate Project Costs  
(page 2)

Supplies and Expense

Commercial Materials	
Texts, Scores & Programed Sequences	200
Films Purchased	250
Films Rented	100
Filmstrips/Records/Tapes/etc.	125
Locally Produced Materials	
Graphics	75
Photography	300
Audio Tapes	750
Telephone	100
Printing	625
Misc. Supplies (paper, slide trays, binders, etc.)	125
<u>Total:</u>	<u>\$2,650</u>

Total Cost of Project (Approximate):

Personnel	\$26,350
Supplies and Expense	<u>2,650</u>
	\$29,000
Central Office Funds	\$10,559
Campus Funds	<u>18,441</u>
	\$29,000

## VIII. Discussion

The results of this study demonstrate, for all instructional sections, notable changes in student performance as a result of the type of instruction provided. Performance on the pre-tests was generally poor; performance on the post-tests was significantly improved. The extent of the improvement from pre- to post-tests was very probably attenuated since, in the judgment of the instructors, the post-tests were composed of more difficult items than the pre-tests. Thus, in the absence of any instructional effect, performance would have decreased with the passage of time.

Pre-test performance was generally poor for all students on both the written and aural formats. It was observed, however, that two factors were strongly related to the depressed pre-test scores. Students with no previous musical training performed much more poorly on the pre-tests than students with prior training, and pre-test performance was generally at lower levels for the written test than for the aural test. The improvement in performance from pre- to post-tests was related to the factors which were inhibiting the pre-test scores. In general, the effects of instruction were more beneficial to written than to aural performance and to students without prior musical training as compared to students with prior training. Thus, there were highly significant

improvements in student performance from the pre- to the post-tests and these improvements were greatest in three of the four major units for the students with no prior musical training. In the final unit on the Music of Today both groups performed equally as well. By this time the two groups were more closely homogeneous in ability, while at the same time, both groups were equally uninformed to begin with about "youth music".

As implied above, the primary locus of the differences between the two groups of students was at the pre-test. There were substantial differences between the two groups at the time of the pre-tests; these differences were substantially reduced at the time of the post-tests in the first three instructional sections (the A x C interaction was significant at the .05 level in the first two sections and the probability level was less than .10 for the third section). Thus, the individualized approach was effective in terms of reducing the differences in musical ability between the two groups of students.

The overall differences in pre-test performance between the two groups of students were more apparent on the aural than on the written test indicating that prior musical training is of greater importance in developing aural skills than in developing cognition of musical information per se. While the

information provided in each instructional section improved the student's aural skills and cognition, the amount of measured improvement was greater on the written than on the aural test. This finding may be a function of the nature of the instruction provided, the skills involved, or it may be related to the very low performance shown on the written pre-tests.

In the first two and in the last instructional sections, there were highly significant differences between overall performance on the aural and written tests, with aural performance being significantly better than written performance. There was no difference between the two test formats within the third instructional section.

The student questionnaire identified both strengths and problems of the course. It also served as one basis for revisions that were made for the following semester. (See Appendix B.)

The students found the objectives helpful (77%), the examinations valid (67%), appeared to have a positive attitude (57%), and strongly supported the use of live performers in the seminars (97%). 46% stated they would take additional courses in music if they were offered with 60% supporting the redesign of other courses along the lines of independent study. 61% said, if offered in the traditional lecture for-

mat and in the format used in this course, that they would prefer the approach used in this course.

The most negative response was in the area of time required for the course. 67% felt it was extensive and unreasonable.<sup>7</sup> While not appearing as negative responses, other items did identify areas for revision. General organization and the agreement of subject matter with clearly defined course objectives were not as positive as would have been desired. 26% of the students did not feel that there was adequate opportunity for personal attention (45% did, however).

The seminars did not appear to be as helpful in answering questions as they might have been. Students, however, did not ask as many questions as they might have. This may have been a result of a kind of insecurity resulting from such a large dose of independent study. In instances where no questions were asked, reinforcement and/or refinement were applied.

There was substantial difference in student reactions to the four modules. As was anticipated, Module IV (Music of Today) received the most positive response with the

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<sup>7</sup>The time studies reported on pages 37-40, 42-43 would indicate however, that time actually spent in independent study varied considerably; the negative response here most likely reflects the fact that this course made more use of the time "theoretically" and "traditionally" allotted to it, than other courses--even those with the major area of the student.

introductory and prerequisite section (Module I) being the least preferred. This was particularly true in the area of time necessary to complete the independent learning units. There did not appear to be significant differences in the reactions of students with different musical backgrounds. Changes found in student reactions to selected questions as a result of revisions will be found in Appendix B.

The fact that time spent in the Independent Learning Laboratory did not have a significant relationship to achievement is, from the standpoint of instructional design, important. It can be concluded from this finding that the design of the materials was such that a student spent the amount of time that he, as an individual, required to meet the pre-stated objectives. It is the feeling of the writers of this report that time spent should not be a critical factor in determining overall student success. Listening time did appear to have some relationship to success on the aural questions for those students without musical background. While not statistically significant, Level III students did spend more time in the laboratory and go more often than students with musical backgrounds. The average time spent in the laboratory was 85 minutes with a range of from under 15 minutes to over 3 hours.

Perhaps most significant was the effectiveness of the

individualized approach to the course. It is most relevant that this project proved how successful individualizing instruction can be in closing the performance gap between those students with prior musical training and those without such training.<sup>8</sup> This finding should prove equally relevant for most other introductory or "survey" courses on the college level. The course did not, as so often is the case, "turn off" the more sophisticated students. In fact, as will be noted later in this report, the course appears to have retained most of the uninterested while, at the same time, encouraging more students with solid musical backgrounds to enroll.

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<sup>8</sup>"Closing the performance gap" means in essence that students who started with many weaknesses made rapid and significant progress to the degree that they were able to challenge the more advanced students. These later, however, were equally challenged to go beyond the achievements they brought with them. Thus the course quickly gained a new reputation and enrollment. The second semester showed a dramatic increase (by means of the same pre-test) in the per cent of students who had considerable prior musical training.

## IX. General Observations

While not included as formal elements of the project, several observations can be made that are, to those involved in the project, highly relevant.

1. *Students require extensive orientation before beginning a course that emphasizes independent study and uses behavioral objectives.*

The "average" college student has not had the experience of working independently; his hours, assignments and responsibilities are traditionally highly structured with little opportunity for self-scheduling and learning options. As a result comprehensive orientation is required for courses of this type. For example, during the first field-testing sequence, students tended during the earlier weeks to go to class when nothing was scheduled since the time had been set aside on their schedules. The concept of independent study and individualization also tended to "worry" some of the students. It became immediately apparent that the initial orientation period of one-half period had to be extended to cover those operational elements of the course that were considered important and to answer any questions that might arise.

(For the second semester this time was doubled. See Appendix B.)

2. *Most courses do not require three hours of work for each credit hour taken.*

Traditionally, faculty and institutions have stated that each class hour should require approximately two hours of outside work. This course with its structured assignments appeared, for the vast majority of students, to require more hours than any other course they were taking. This raises several interesting questions since the amount of time actually required was not this great. For Module II (a 3½ week sequence), the average student spent 7½ hours in the Independent Learning Laboratory, 3 hours in large group meetings, 3 hours in seminars, ½ hour on the dial access system, plus whatever time they spent in completing reading assignments and in general study. The conclusion must be made that few students require the anticipated time for most of their courses.

3. *While some students seek out the "mickey-mouse" courses, others prefer more challenging instruction.*

This course traditionally has fewer students during the second semester. While the number of students in the

course is traditionally lower for the spring term,<sup>9</sup> the number of students in Level I (those with strong music backgrounds) tripled. It thus appears that many students with strength in music who had avoided the course as being redundant and uninteresting enrolled once the strengths of the new program became known. It was interesting to note that at least three of the 160 students enrolled during the Fall semester formally requested and were granted transfer into the music curriculum.

4. *Students must be taught to use behavioral objectives.*

In watching students use the programed booklets it became apparent to the instructor that many were taking far more extensive notes than was required. In follow-up discussions it became obvious that many were not using the statement of objectives to assist them in their studying. Follow-up emphasis by the instructor, carried formally into the spring orientation, emphasized how this information could assist the student by high-lighting the more relevant materials and substantially reducing the amount of required note taking. As noted by the comments of many of the students, this technique proved invaluable

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<sup>9</sup>This time, however, a drop of about 50% was somewhat more than traditional.

once it was understood and substantially reduced the study time required by many of the students.

5. *Individualization requires extensive analysis of the instructional components and details.*

Throughout this project the necessity for careful structuring of the component parts was obvious. The materials not only had to be carefully interrelated (a numbering or pagination error could cause extensive problems for the students), but available in enough copies at the exact time they were required. The exact number of units required depended on length of assignment, the time available for completion, the hours of availability, the student's study habits, and whether the unit was optional or compulsory. During the first semester four to ten duplicate sets were adequate to meet the needs of over 160 students in the Independent Learning Laboratory. The importance of assigning one individual, other than the instructor, to coordinate the components of a course of this design cannot be overemphasized.

## X. Conclusions

1. An individualized approach to instruction can significantly reduce instructional performance differences based on prior knowledge.

2. The "structured" independent learning approach combined with seminars and selected large group meetings was instructionally effective in meeting the pre-stated objectives for all levels of students enrolled in a music course for non-music majors.
3. The combination of branching programed texts with audio proved significantly effective in developing aural skills.
4. The systems approach used in the development of this course is effective and can be utilized in the development of other courses.
5. The instructional approach used in this project permitted an increase in both breadth and depth of content over the traditional course with the faculty members involved (both as instructors and performers) spending a greater percentage of their time in direct contact with students.
6. When a course is designed to facilitate individualization and uses a branching logic, there will be no relationship between time and achievement with the possible exception of those skill areas (aural recognition, etc.) where repetition or sheer exposure is an effective teaching technique.
7. The reaction of students to the time requirements of this course raises several basic questions as to how much time is generally required for completion of a course and how students actually spend their time. Further studies in this area would be extremely useful as new patterns of instruction are explored.
8. The modular design of this course facilitated effective revision on a unit-by-unit basis, and has facilitated use of the materials within other courses.

Appendix A

Student Manual, Selected Pages

**STUDENT MANUAL**

MUSIC IN THE WESTERN WORLD

**IMPORTANT: BRING THIS MANUAL WITH YOU  
TO ALL CLASS MEETINGS AND  
INDEPENDENT LEARNING  
ASSIGNMENTS.**

Copyright State University of New York, January 1971

To the student:

This manual has been designed to assist you throughout this course. It will not only provide you, on an almost daily basis, with information concerning your responsibilities and assignments, but also with a rather detailed outline of what you are expected to be able to do at the completion of the individual exercises and units. If you refer to, and use this information regularly, you will find the course easier and your accomplishment will be greater.

This course is in itself unusual. It has been designed to meet your needs on an individual basis and, where possible, to permit you to select specific areas for study according to your own interest. In addition, the large lecture sessions normally found in courses of this type have been replaced by seminars made possible by the extensive use of "independent study." At times you will find yourself spending approximately six to ten hours in independent study in a single week. This, however, is far less than many of the more traditional courses where outside listening often exceeded fifteen hours in the same period. As the course progresses, you will find that an attempt has been made to utilize your time in the most efficient way possible.

This course is based upon highly successful pilot studies conducted at the State University College at Fredonia during the fall and spring semesters of 1969-70. Since we are hoping to refine and improve the course continually, your comments and recommendations are encouraged. You will find forms for this purpose in the back of this manual. If, as the course progresses, you have any questions or suggestions, please do not hesitate to contact your instructor.

Thank you for your cooperation, and may you enjoy this course.

Dr. Robert M. Diamond

### COURSE DESCRIPTION

This course is the one-semester introductory music course for the non-music major. It is designed to help you develop an understanding of music in the Western world.

As mentioned previously, this is not a traditional course in concept or design. As you continue reading, please remember the following:

1. While five hours a week have been set aside on your schedule for this course, you will seldom meet for this many sessions. We have asked you to reserve this time in order to give you the opportunity of selecting one of a series of options open to you at different times throughout the semester.
2. Emphasis is being placed on independent study, therefore, much of your work will be done alone. The only requirement is that you complete a particular sequence before a specific date; therefore, you will probably find a greater need for self-discipline than encountered in previous studies.
3. While everything is being done to help, your success in this course will depend solely on yourself. Your progress will depend on how successfully you complete and retain the material given in the independent study assignments.

The course itself is divided into four major units or modules. Scheduled for approximately four weeks each, the modules are as follows:

#### I. INSTRUCTION AND PREREQUISITES

After a brief introduction, you will be given an achievement test designed to help us evaluate your music background. Based on your performance on this test, you will be given an individual assignment designed to correct specific deficiencies that are identified. Students with comprehensive backgrounds in music will, during the period, have the opportunity of working independently on projects they select in a conference with the instructor. All students will complete the independent learning assignments as part of this module. At the completion of this sequence you should have the necessary background for all further modules of the course.

II. INSTRUMENTAL FORMS

An introduction to the instrumental forms in music: symphony, concerto, chamber music, etc. This module will include live and recorded music, plus a filmed symphony performance. You will also have the opportunity of selecting a minimum of two of the seminars that will be offered.

III. VOCAL FORMS

An introduction to vocal music: opera, oratorio, cantata, motet and mass, etc. In this unit you will have even greater range in your choices of seminars and independent learning assignments.

IV. TODAY

Ranging in topics from African and Latin American music to Negro gospel, blues, folk, rock, jazz, and the "new music," this unit will provide you with the opportunity of studying in depth several of the areas you may find most interesting.

IMPORTANT NOTICE:

For additional information, room changes, and special meetings, check the Bulletin Board outside of the Independent Learning Laboratory.

ROOMS, SOURCES, AND RESOURCES

As you progress in this course you will use a broad spectrum of the resources and facilities the college has to offer. This will include:

Mason Auditorium

For all classes, seminars, and group meetings, unless otherwise noted.

Independent Learning Laboratory

For all assigned independent learning assignments, unless otherwise noted. This facility, on the ground floor of McEwen Hall (room G-22), will be open daily except Sunday and on most evenings.

Dial-Access System

For all listening assignments that do not utilize any other media. This system is operational 24 hours a day, seven days a week, and has stations in the study areas of every dormitory, Mason Hall, the Library, and the Independent Learning Laboratory.

IMPORTANT: If the Dial-Access system is out of order, or if you wish to start and stop an audio sequence as you listen, several copies of this material are available in cassette form in the Independent Learning Laboratory.

At times during the course you may also use the Music Library and Reserved Book areas of Reed Library.

### COURSE SEQUENCE

The complete course sequence is outlined for you on the four diagrams that follow. On these diagrams you will find the following information:

1. Specific topics to be covered
2. Specific module sequence
3. Student options
4. Individual unit numbers
5. Dates of meetings (class sessions and seminars) and dates between which the independent learning assignments should be completed.

The arrows are designed to indicate the sequence you will follow through each module. Student options are indicated by words or by branching arrows.

The numbers in each box are extremely important as they will be used throughout the course to identify all information and materials for each individual unit and relate all this to the individual pages of this manual.

Dates shown on Modular Outline are of actual class meeting times only. Sequences not dated are independent assignments which, as will be noted on the information sheets, must be completed before your next scheduled class or seminar.

### INFORMATION PAGES

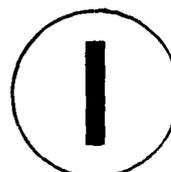
Following the module outlines you will find, in numerical order, information pages on each unit. Here will be listed title, dates, type of unit, location, objectives, and other important information such as related assignments and material that you should have with you when you are attending a meeting or working independently.

#### Using the Statements of Objectives

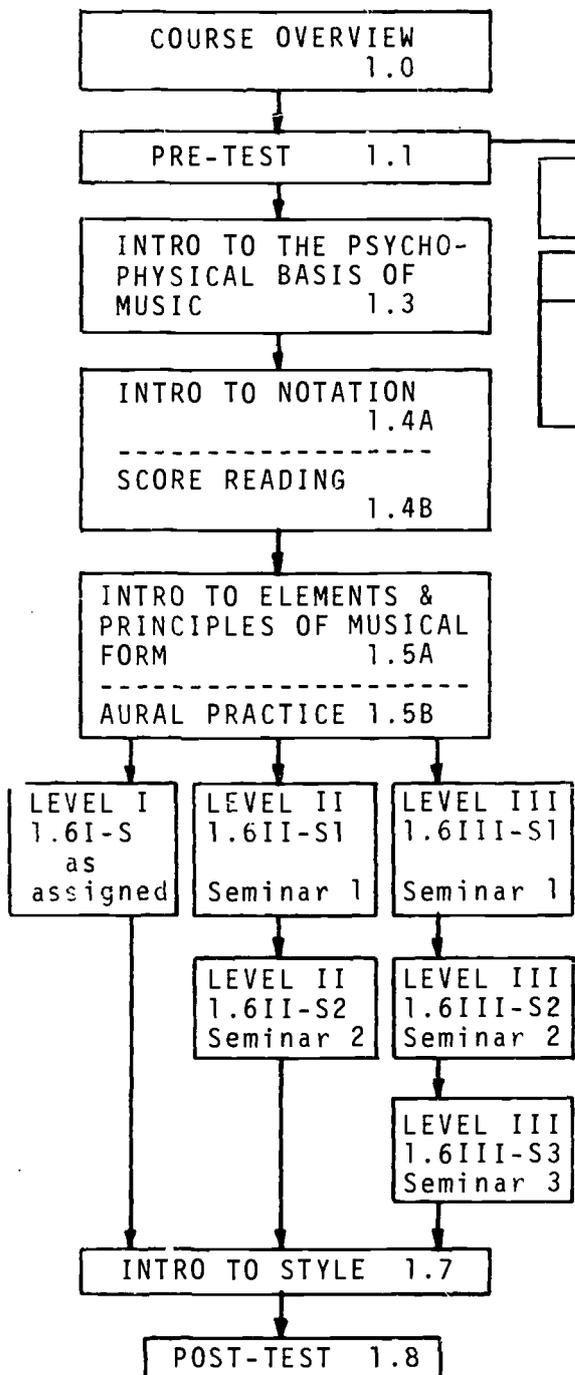
The objectives which you will find listed for each unit of study should be extremely useful as they are the basis on which all test items will be based. Therefore, study these objectives carefully before you complete the assignment, and use them to guide your work. Correct use of these objectives will eliminate much unnecessary confusion and time, and will make your study more profitable and successful. In the past we have found that those students who did not use the stated objectives as a basis for study spent far more time on each unit than was necessary.

Music 215 - Music Appreciation  
 State University College  
 Fredonia, New York  
 Spring, 1971

# MODULE



## INTRODUCTION & PREREQUISITES



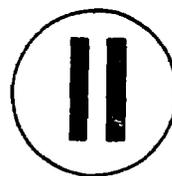
INDIVIDUAL ASSIGNMENTS	
LEVEL I	LEVELS II & III
INDEPENDENT PROJECTS	REMEDIAL UNITS IN ELEMENTS OF MUSIC 1.2

MUSIC IN THE WESTERN WORLD			
UNIT	DATE	FORMAT	
1.0	2/2	Class	
1.1	2/3	Pre-Test	
1.2	I	P	
1.3	I	T/S	
1.4A	I	T/S	
1.4B	I	T/S	
1.5A	I	T/S	
1.5B	I	P/A	
Level I	1.6I-S	2/9	Seminar
Level II	1.6II-S1	2/11	Seminar
	1.6II-S2	2/15	Seminar
Level III	1.6III-S1	2/10	Seminar
	1.6III-S2	2/12	Seminar
	1.6III-S3	2/16	Seminar
1.7	I	Text-T/S	
1.8	2/19	Post-Test	

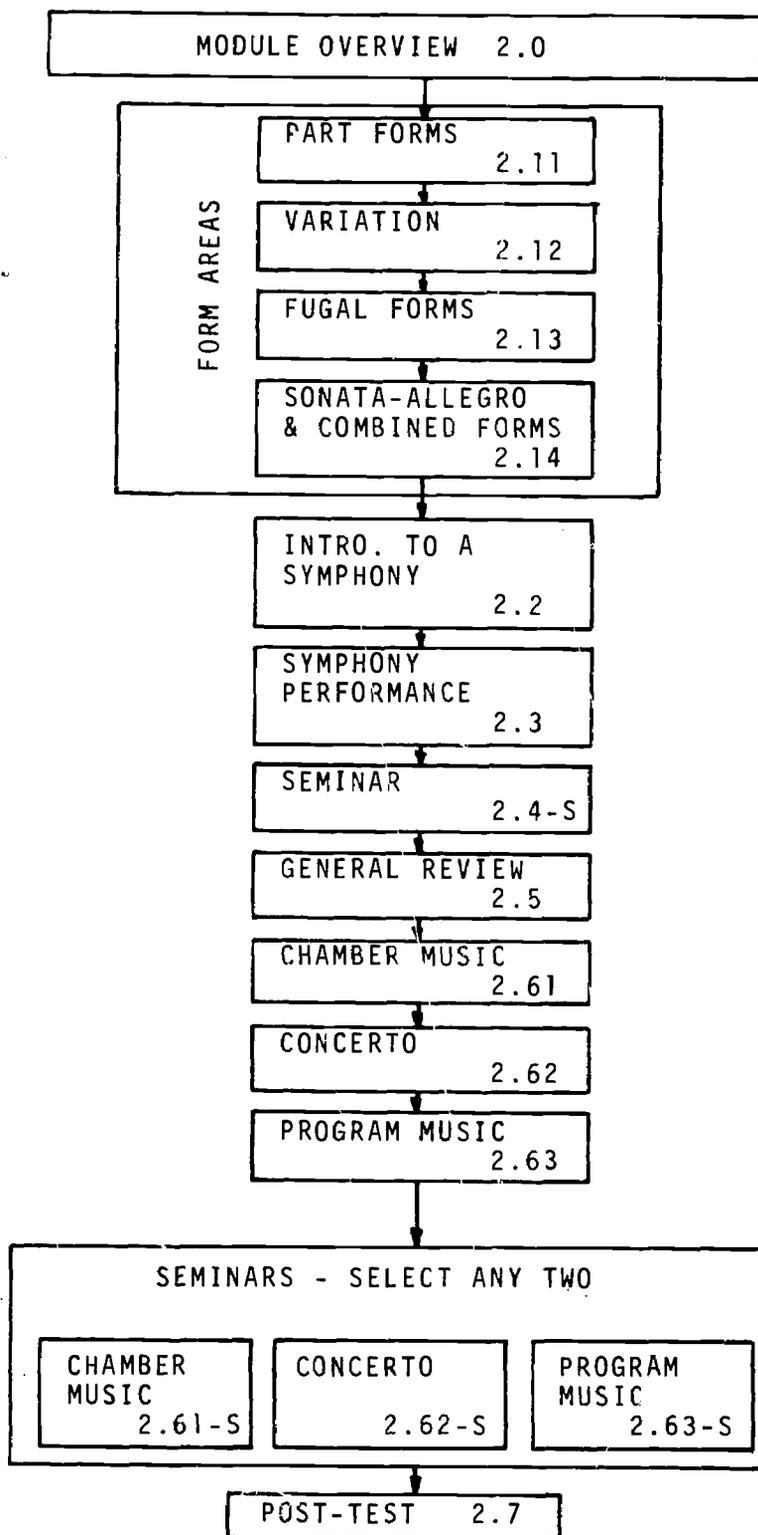
**IMPORTANT:** All seminars and class meetings will be held in Mason Auditorium at 12:00 Noon on date scheduled.

- KEY: S - Seminar  
 I - Independent Study  
 P - Programed Text  
 P/A - Programed Text with Audio  
 T/S - Tape-Slide

# MODULE



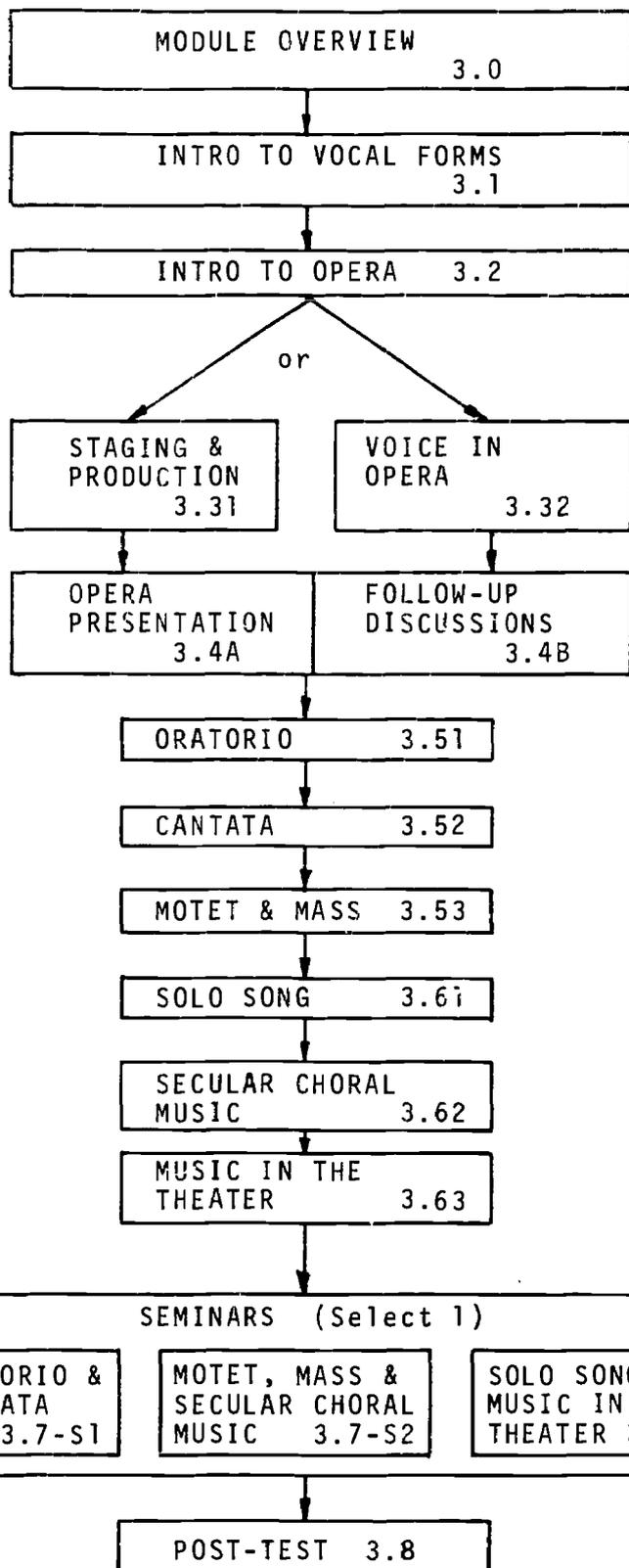
## INSTRUMENTAL FORMS



MUSIC IN THE WESTERN WORLD		
UNIT	DATE	FORMAT
2.0	2/22	Class
2.11	I	P/A
2.12	I	P/A
2.13	I	P/A
2.14	I	P/A
2.2	I	A
2.3	3/8	Class
2.4-S	3/9	Seminar A
	3/10	Seminar B
	3/11	Seminar C
2.5	3/12	Class
2.61	I	P/A
2.62	I	P/A
2.63	I	P/A
2.61-S	3/17	Seminar
2.62-S	3/19	Seminar
2.63-S	3/19	Seminar
2.7	3/22	Class

# MODULE

VOCAL FORMS

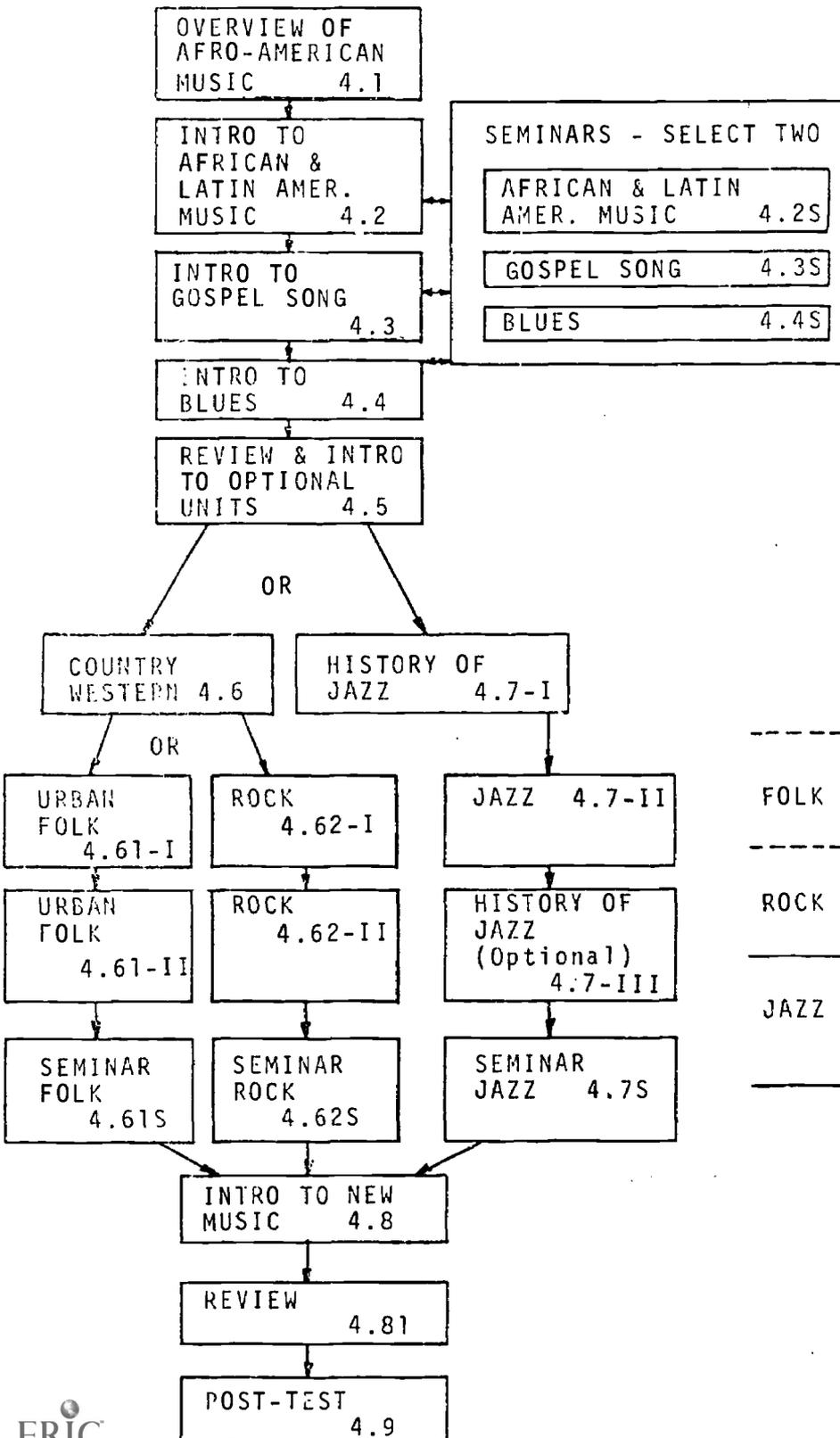


MUSIC IN THE WESTERN WORLD		
UNIT	DATE	FORMAT
3.0	3/23	Class
3.1	I	P/A
3.2	I	P/A
3.31	I	T/S
3.4A	3/31	Class
3.4B	4/1	Class
3.51	I	P/A
3.52	I	P/A
3.53	I	P/A
3.61	I	P/A
3.62	I	P/A
3.63	I	P
3.7-S1	4/21	Seminar
3.7-S2	4/22	Seminar
3.7-S3	4/23	Seminar
3.8	4/26	Post-Test

# MODULE



TODAY



MUSIC IN THE WESTERN WORLD			
UNIT	DATE	FORMAT	
4.1	I	P/A	
4.2	I	P/A	
4.2S	4/30	Seminar	
4.3	I	P/A	
4.3S	5/3	Seminar	
4.4	I	P/A	
4.4S	5/4	Seminar	
4.5	5/5	Class	
4.6	I	P/A	
<hr/>			
FOLK	4.61-I	I	P/A
	4.61-II	I	P/A
	4.61S	5/11	Seminar
<hr/>			
ROCK	4.62-I	I	P/A
	4.62-II	I	P/A
	4.62S	5/12	Seminar
<hr/>			
JAZZ	4.7-I	I	T/S
	4.7-II	I	T/S
	4.7-III	I	T/S
	4.7S	5/13	Seminar
<hr/>			
4.8	I	P/A	
4.81	5/18	Class	
4.9	Exam Period		

TITLE: Form Areas: II. Variation

Unit Number: 2.12, part I  
Page: 2.12 a

Format: Programed  
booklet with audio

Objectives:

At the completion of this unit you should be able to:

1. Given a list of characteristics and/or diagrams, identify those which apply to:
  - a. continuous variation
  - b. sectional variation
2. Given a recorded example of "theme and variation" form, identify type of variation and describe or list major features of each variation.
3. Given a list of characteristics and/or diagrams, distinguish between a chaconne and a passacaglia.

Prior Assignment:

Read in Scored for Listening for background:

1. The Classic Period, chapter 15, pages 72-75.
2. Variation Forms, chapter 11, section I.B, pages 48-49.
3. Expansion, chapter 10, pages 41-44.

Post Assignment:

Complete self-test, page d and e of this manual, sometime before the post test of this module. The answers are found in booklet 2.12, pages 38-41.

Suggested Listening:

Listen to "Variation" (2.12) part II on dial-access system. It is also in cassettes in the Ind. Learning Lab. Time: about 30 minutes.

Suggested Reading Assignments (optional):

Read in Harvard Dictionary of Music, 2nd Edition, Apel. "Variations", pages 892-895.

More advanced: Stein, Leon. Structure and Style, chapters XIII, XVIII.

Bring with you:

1. Scored for Listening
2. Student Manual

TITLE: Variation

Unit number: 2.12

Page: 2.12 b

From booklet page: 19

You will now listen to Variation III from the second movement, Symphony #94 in G major by Haydn. As you listen, check (✓) the answer which best describes the procedure of variation used in the 1st and 2nd periods of parts A and B. Read the choices over once or twice to familiarize yourself with them before turning on your tape recorder.

In variation III the techniques of variation are:

Part A: 1st period uses: (a) same melodic contour of theme with rhythmic alteration of it.  
(b) rhythmic alteration of theme and new melodic contour.

2nd period uses: (a) new form of theme harmonized.  
(b) contour of theme as before, but with countermelody in oboe and flute accompanying it.

Part B: 1st period uses: (a) new form of theme with rhythmic alteration.  
(b) 2nd part of the original theme with woodwind countermelody from second period of A continued.

2nd period uses: (a) exact repetition of the 1st period of part B.  
(b) repetition of melody with new countermelody.

When you are finished (you may wish to listen to the section several times), turn to page 20 in your booklet for the correct answers.

TITLE: Variation

Unit Number: 2.12

Page: 2.12 c

From booklet page: 21

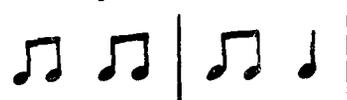
Variation IV preserves the harmonic structure of the original statement of the theme. By referring to the score, page 307 of The Norton Scores Vol. I., select which answer best describes the technique of variation used in the 1st and 2nd periods of A, and in the 1st and 2nd periods of B. Turn on your tape after previewing the questions.

Part A; 1st period: (a) melody is slightly altered rhythmically but the contour of it is preserved, and it is accompanied by a vigorous counterpoint in the violins.

(b) melody is completely changed and only the rhythm of it is retained.

2nd period: (a) original melody occurs, but with a new counterpoint to it.

(b) original melody is still recognizable but it is highly varied rhythmically.



Part B; 1st period: (a) melody is preserved exactly as before with a rapid counterpoint in the low strings added.

(b) the general sound of the original melody is the same but it has been ornamented (in bar 3) rhythmically changed (5-6), and altered (7-8).

2nd period: (a) this section consists of full orchestration with counterpoint against a rhythmically and tonally altered presentation of the theme and is followed by a coda.

(b) the theme occurs exactly as it did in the 1st period of Part B and is followed by a restatement of the original theme.

Return to page 22 in your booklet to check your answers. If you did not do well, you should review the material before going on!

TITLE: Continuous Variation Forms

Unit Number: 2.12

Page: 2.12 d

From booklet page: 38

## Directions:

If the statement is true, circle the (+) sign in front. If it false, circle the (-) sign and change the underlined word or phrases so that it will be correct. When you are finished, return to page 39 in your booklet to check for the correct answers.

- + - 1. Variation as a principle is found in the theme and variation form exclusively.
- + - 2. When the variation principle is applied as a method of formal organization, there must be some fixed or unvaried element(s) which unifies the form.
- + - 3. In the formal structure of the section to be varied is usually a structure of periods combined into a small binary or ternary form.
- + - 4. The format of statement-development-restatement is a characteristic of variation form.
- + - 5. Continuous variations have sections which are understood as being binary or ternary structure.
- + - 6. In sectional variations, the theme and ensuing variations may have very tenuous or subtle relationships as the form unfolds.
- + - 7. A coda or restatement of the theme is often a feature of both sectional or continuous variations.
- + - 8. A rather sophisticated and subtle melody is the best kind to use for a set of variations because the listener will find it easier to remember.
- + - 9. Retaining the harmonic structure of the theme may provide the element of unity against which variation occurs.
- + - 10. Motives are poor subjects for variation.
- + - 11. The element of continuity in continuous variation is a bass line or harmonic progression of several phrases.
- + - 12. Passacaglia and chaconne are examples of sectional variation.

TITLE: Chamber Music

Unit Number: 2.61, part I

Page: 2.61 a

Format: Programed  
booklet with audio

Objectives:

At the end of this unit you should be able to:

1. Describe and/or identify the four different applications of the term "chamber" music.
2. Identify the make-up of a chamber group when given the name of that group and/or provide the name of the group when given the make-up of the group.
3. Identify the three characteristics of chamber music which have a direct effect on the choice of the physical setting in which such music is heard.
4. Upon hearing examples of chamber music aurally, identify it as such and discern and identify the factors of form, texture, and make-up of the ensemble.

Prior Assignment:

Read page 15, section B in Scored for Listening.

Post Assignment:

Read article on "Chamber Music" in Apel., Harvard Dictionary of Music, 2nd Edition.

Suggested Listening:

In the Ind. Learning Lab. there are several cassettes labeled 2.61, Part II. There are three examples of piano sonatas recorded and the scores are also available for you to follow. They are labeled. It is recommended that you listen and follow the scores as practice in perceiving sonata-allegro form.

Bring with you:

1. pages from student manual labeled 2.61a, 2.61b, 2.61c.
2. scrap paper

UNIT TITLE: Solo Song

Unit Number: 3.61

Page: a

Format: Programmed  
text with audio

Objectives:

At the end of this unit you should be able to:

1. Identify and/or describe those elements which characterize a song.
2. When hearing musical examples, identify the major text setting devices used in setting songs:
  - a. strophic
  - b. modified strophic
  - c. through-composed
3. Identify and/or describe the three music-text relationships as they apply to solo song.
4. Identify (aurally or verbally) and list the means by which a composer creates a song cycle.

Suggested Reading:

In the Harvard Dictionary of Music, 2nd Edition:  
"Song," page 794-795.

When completing this unit you should bring with you:  
scrap paper  
pencil

Unit Number: 5.61

Page: b

From booklet page: 33

Questions to be used while listening to the Beethoven song cycle, "An Die Ferne Geliebte:"

1. Is the first song
  - a. strophic
  - b. modified strophic
  - c. through-composed
  
2. Other than text, what did Beethoven do to show that the first two songs are related?  
(See page 26 in your booklet for a choice of possible means.)
  
3. What is the form of the second song?
  - a. A B A
  - b. A B A'
  - c. A B B
  - d. A B C
  
4. Other than the text, what did Beethoven do to show that the second and third songs are related?  
(See page 26 in your booklet for a choice of possible means.)

## Appendix B

### Course Revisions & Related Results

While generally successful, it was immediately apparent that some problems did exist in both the overall sequence and in some of the instructional units. Based upon student comments, observations by the instructor, and student performance on the module tests, specific problems were identified with revisions being made in time for the following semester (spring). A brief description of the problems, the modifications, and results follow:

1. Many of the units appeared to be too long with most of the negative comments by students high-lighting this problem.

*Action: Most programed sequences were revised with the majority of the narration deleted and the audio portions being shortened wherever possible.*

2. The multi-screen presentation on Style (1.6) because of breadth and depth to be ineffective and ill-suited for non-majors.

*Action: This unit was replaced by a programed booklet/audio cassette combination with several of its stronger elements being redesigned as optional tape/slide sequences for the Level I*

students and for use with music majors (see specific data that follows).

3. Students appeared to have continuing problems following a musical score, and in aural recognition of specific musical forms.

*Action: Two structured independent learning units were added to Module I, Score Reading (1.4B) and Aural Practice (1.5B). The former sequence consisted of a synchronized tape/slide presentation while the aural practice included a programed sequence (included in the Student Manual) that was used in conjunction with an audio cassette.*

4. In Module I students were not ready for the seminars at the time they were scheduled.

*Action: Seminars were re-scheduled later in the sequence (see flow diagram in sample Student Manual pages, Appendix A, which may be compared to earlier sequence found on page 8 of this report).*

5. Optional listening and review sessions were not utilized by students as a result of scheduling difficulties and the time already being spent by

students in the course.

*Action: These were replaced by optional listening units on the dial access system which were therefore, more accessible and generally shorter.*

6. Students were confused at first by the design of the course and by the emphasis on independent study.

*Action: The time spent in orientation was doubled with increased emphasis being placed on the responsibility of the individual student. A plan was made to tape record the orientation session for late registrants, but everyone concerned forgot, and it was never implemented. Still a good idea; it would have been put on dial access.*

7. Students consistently spent extensive time in note taking, often of unimportant material.

*Action: Increased emphasis was placed on the use of behavioral objectives during the orientation period.*

8. Students insecurity with independent study often resulted in excessive amount of effort.

*Action: Before each module test, students were given explicit prescriptions in how to use the study materials for review purposes.*

In addition to the general editing and revision of all units, several other modifications were made. All audio sequences in Module IV (Today) were redesigned into the more effective combination of self-testing programmed booklets with audio cassette. Though no formal analyses was possible, the instructional improvement which resulted from redesigning the presentation format was so significant that it was virtually impossible to arrive at any semblance of a natural "curve".

Since student performance on all the pre-tests showed little prior knowledge in the areas being covered for most students, the tests were dropped with the additional time being used for instructional purposes.<sup>1</sup> The evaluation instruments were also improved by revising those items which, by their design, had created problems for the students or did not measure adequately pre-stated objectives. (These items were not included in the data used in the body of this report.)

The effects of revisions on the individual sequences were also apparent. For example, changing the Introduction to Style sequence from a multi-screen presentation to a programmed sequence with audio had the following effect on student reactions (see Table VIII).

---

<sup>1</sup>Under a systems procedure these tests would be re-administered on regular intervals to identify any changes in the student population that might occur.

Table VIII  
 Results of Revisions on Questionnaire for  
Introduction to Style Unit  
 (in %)

	Fall (n - 21)	Spring (n - 10)
	%	%
<hr/>		
I felt this sequence was		
extremely interesting	0	10
interesting	20	40
of some interest	32	20
of little interest	16	10
boring	16	10
no answer		10
<hr/>		
I felt the material was paced		
too fast	62	20
a little fast	24	0
just right	14	60
a little slow	0	10
too slow	0	10
<hr/>		
I felt I learned		
a great deal	10	20
some	33	40
not very much	33	30
very little	24	10
<hr/>		
I felt this sequence was		
very clear	0	20
clear	14	40
slightly confusing	33	40
extremely confusing	53	0
<hr/>		
Generally, I would rate this sequence as		
excellent	0	20
good	29	20
fair	29	50
poor	32	10
extremely poor	10	0
<hr/>		

To test the effectiveness of the revisions in Module I and II a student opinionaire was administered during the ninth week of the spring semester, to a random group of 25 students. Since the first module was the one that had received the most critical reactions from the students and has undergone most revisions, it was felt that this timing would show any significant changes in attitudes as a result of these modifications. The comparison between identical items as given at the end of the fall semester and mid-way during the spring term will be found in Table IX.

While all questions showed a more positive attitude on the part of the students, there were, as a result of these modifications, major improvements in the reaction to course organization (80% positive from 45), the validity of examinations, the usefulness of pre-stated objectives, and general student interest in music and their attitudes toward the course and seminar organization. There was also a major improvement during the spring semester in the academic achievement of the students during the fourth module of the course. While 52% of the students still felt the course was unreasonable in its time requirements, the percentage who were most adamant in this feeling was reduced from 29 to 16% while 44% felt the time requirement was justified, an increase from 22%. However, as noted in the body of this report, there is some

question as to how much time students actually spend working in a course and how much time should be expected. While some revisions are still necessary and are being made, it is the general feeling of those concerned that, within the limitations of existing resources, the course as it is now designed can bring the student and the teacher into meaningful contact and in the process give each student the opportunity of efficiently reaching his maximum potential.

Table IX  
Results of Revisions on Student Opinion  
(in %)

	Fall (n - 26)	Spring (n - 25)
1. I find the course to be exceptionally well organized; subject matter in agreement with clearly defined course objectives.		
Strongly agree.....	7	36
Agree.....	38	44
Uncertain; no opinion.....	14	8
Disagree.....	32	8
Strongly disagree.....	9	4
2. The examinations so far are valid tests of the course material.		
Strongly agree.....	17	28
Agree.....	50	44
Uncertain; no opinion.....	8	16
Disagree.....	21	12
Strongly disagree.....	4	0
3. I find the list of instructional objectives found in the manual for each unit very helpful.		
Strongly agree.....	32	52
Agree.....	45	32
Uncertain; no opinion.....	13	16
Disagree.....	9	0
Strongly disagree.....	1	0
4. There is adequate opportunity for personal attention in this course.		
Strongly agree.....	10	12
Agree.....	35	36
Uncertain; no opinion.....	29	32
Disagree.....	16	12
Strongly disagree.....	10	8
5. My general interest in music is increasing as a result of my enrollment in the course.		
Strongly agree.....	20	32
Agree.....	42	48
Uncertain; no opinion.....	23	12
Disagree.....	10	8
Strongly disagree.....	5	0

	Fall	Spring
6. In general, my attitude toward this course is positive.		
Strongly agree.....	12	20
Agree.....	43	60
Uncertain; no opinion.....	21	12
Disagree.....	17	4
Strongly disagree.....	6	4
7. I have found the seminars to be exceptionally well organized; subject matter in agreement with clearly defined course objectives.		
Strongly agree.....	6	16
Agree.....	28	60
Uncertain; no opinion.....	27	16
Disagree.....	29	8
Strongly disagree.....	9	0
8. I find the seminars to be extremely helpful in answering questions that I have.		
Strongly agree.....	7	8
Agree.....	34	40
Uncertain; no opinion.....	26	44
Disagree.....	32	8
Strongly disagree.....	1	0
9. I strongly support the concept of having live performers in seminars.		
Strongly agree.....	71	72
Agree.....	26	24
Uncertain; no opinion.....	1	0
Disagree.....	1	0
Strongly disagree.....	0	4
10. I find the amounts of time for this course to be reasonable.		
Strongly agree.....	5	8
Agree.....	17	36
Uncertain; no opinion.....	11	4
Disagree.....	38	36
Strongly disagree.....	29	16

Table IX - page 3

	Fall	Spring
11. I strongly support the redesign of other courses along the lines of independent study.		
Strongly agree.....	20	36
Agree.....	40	4
Uncertain; no opinion.....	19	44
Disagree.....	8	8
Strongly disagree.....	13	8
12. As a result of this course, I would like to take additional courses in music if they are offered.		
Strongly agree.....	24	24
Agree.....	22	32
Uncertain; no opinion.....	27	28
Disagree.....	14	16
Strongly disagree.....	13	0
13. If a course in another subject were being offered in the traditional lecture format and in the format used in this course, I would strongly prefer the format of independent study.		
Strongly agree.....	26	36
Agree.....	35	36
Uncertain; no opinion.....	22	24
Disagree.....	8	4
Strongly disagree.....	7	0

Appendix C

DIRECTIONS: Student opinion or attitude is a very important part of the evaluation of this course. This opinionaire is anonymous in order that you may be frank and honest with your responses. After one preliminary question you will find a series of generalizations, principles or ideas about the course in which you were enrolled last semester. You may or may not agree with them; or you may support some more strongly than others. In making your rating for each item use the following marks:

- If you strongly agree with the statement mark .....A
- If you simply agree with the statement mark.....B
- If you are uncertain; have no opinion either way mark.....C
- If you disagree with the statement mark.....D
- If you strongly disagree with the statement mark.....E

For each question you will circle the letter which represents your reaction.

Please indicate the level to which you were assigned in Module I by circling A, B, or C.

- Level I           A
- Level II         B
- Level III        C

As indicated before, rate the following statements about this course in this way:

- Circle:   A if you strongly agree  
          B if you simply agree  
          C if uncertain; no opinion  
          D if you disagree  
          E if you strongly disagree

1. I found the course to be exceptionally well organized; subject matter in agreement with clearly defined course objectives.

- A   B   C   D   E

2. The examinations were valid tests of the course material.

- A   B   C   D   E

3. The course grades were, in general, based on valid evidence of achievement.

- A   B   C   D   E

4. I found the list of instructional objectives found in the manual for each unit very helpful.

- A   B   C   D   E

LENGTH & DIFFICULTY

5. I found the Independent Learning materials for Module I, Introduction and Prerequisites, were very reasonable in terms of length and difficulty.

A B C D E

6. I found the Independent Learning materials for Module II, Instrumental Forms, were very reasonable in terms of length and difficulty.

A B C D E

7. I found the Independent Learning materials for Module III, Vocal Forms, were very reasonable in terms of length and difficulty.

A B C D E

8. I found the Independent Learning materials for Module IV, Today, were very reasonable in terms of length and difficulty.

A B C D E

ORGANIZATION

9. I found the Independent Learning Units for Module I well organized; subject matter in agreement with clearly defined course objectives.

A B C D E

10. I found the Independent Learning Units for Module II well organized; subject matter in agreement with clearly defined course objectives.

A B C D E

11. I found the Independent Learning Units for Module III well organized; subject matter in agreement with clearly defined course objectives.

A B C D E

12. I found the Independent Learning Units for Module IV well organized; subject matter in agreement with clearly defined course objectives.

A B C D E

13. There was adequate opportunity for personal attention in this course.

A B C D E

14. My general interest in Music has increased as a result of my enrollment in this course.

A B C D E

INTEREST

15. The material presented in the Independent Learning Units for Module I was interesting.

A B C D E

16. The material presented in the Independent Learning Units for Module II was interesting.

A B C D E

17. The material presented in the Independent Learning Units for Module III was interesting.

A B C D E

18. The material presented in the Independent Learning Units for Module IV was interesting.

A B C D E

INFORMATIVE

19. The material presented in the Independent Learning Units for Module I was informative.

A B C D E

20. The material presented in the Independent Learning Units for Module II was informative.

A B C D E

21. The material presented in the Independent Learning Units for Module III was informative.

A B C D E

22. The material presented in the Independent Learning Units for Module IV was informative.

A B C D E

CLARITY OF PRESENTATION

23. The material presented in the Independent Learning Units for Module I was clearly presented.

A B C D E

24. The material presented in the Independent Learning Units for Module II was clearly presented.

A B C D E

25. The material presented in the Independent Learning Units for Module III was clearly presented.

A B C D E

26. The material presented in the Independent Learning Units for Module IV was clearly presented.

A B C D E

27. In general, my attitude toward this course is very positive.

A B C D E

28. I found the seminars to be exceptionally well organized; subject matter in agreement with clearly defined course objectives.

A B C D E

29. I found the seminars to be extremely helpful in answering questions that I had.

A B C D E

30. I strongly support the concept of having live performers in the seminars.

A B C D E

31. I found the amounts of time required for this course to be reasonable.

A B C D E

32. I strongly support the redesign of other courses along the lines of independent study.

A B C D E

33. As a result of this course I would like to take additional courses in Music if they were offered.

A B C D E

34. If a course in another subject were being offered in the traditional lecture format and in the format used in this course I would strongly prefer the format of Independent Study.

A B C D E

35. I would prefer that this course remain as a one semester offering rather than two semesters of greater breadth and depth.

A B C D E

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Up to this time my grade is approximately a (circle 1):

A B C D E

I feel that this is a result of (list all factors that you feel are relevant):

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General Course Comments (please be specific and thanks):

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