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THE EDUCATION OF ORCHESTRAL MUSICIANS--AN EXAMINATION OF PRODUCTIVE SCHOOLS OF MUSIC AND THE EFFECTS OF SELECTED ADMINISTRATIVE PATTERNS ON THEIR COURSES OF STUDY

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THE EDUCATION OF ORCHESTRAL MUSICIANS--AN EXAMINATION OF PRODUCTIVE SCHOOLS OF MUSIC AND THE EFFECTS OF SELECTED ADMINISTRATIVE PATTERNS ON THEIR COURSES OF STUDY

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CHAPTER I

INTRODUCTION

The responsibility for training professional orchestral musicians is becoming more and more a function of the university. The economic, technological and social changes in the United States have forced many music conservatories out of existence or have made it necessary for them to affiliate with colleges and universities which will assume all or part of their financial operation.[1] The assuming of the responsibility for training professional musicians by the university presents problems not only for the university but for everyone interested in the growth of the performing arts.[2]

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[1]W. McNeil Lowry, "The University and the Creative Arts," Educational Theatre Journal, XIV (May, 1962), p. 100.

[2]Rockefeller Brothers Fund, Inc., The Performing Arts: Problems and Prospects, A Rockefeller Panel Report on the future of theatre, dance, music in America (New York: McGraw-Hill Book Company, 1965), p. 173.

W. McNeil Lowry states that although "the university has largely taken over the functions of professional training in the arts. . .in the main [the university] has sacrificed professional standards in doing so[3] [italics mine]." The conservatories of recognized standards continue to produce the majority of professional musicians.[4] Therefore, if the conservatories collapse, this takeover of the responsibility by the universities will threaten the quality of the performing arts.[5]

The assumption of the function of the conservatory by the university appears to be irreversible.[6] The university appears to have elements in its administrative pattern which tend to suppress the development of competence by musicians.[7] Lowry suggests that the "creative atmosphere" of the conservatory possibly cannot be transplanted to the school of music of the university.[8] The Rockefeller Panel Report, on the other hand, believes that the altering of the university structure in order to accommodate the education of professional musicians can be accomplished.[9]

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[3]Lowry, op. cit., p. 106.

[4]Rockefeller, op. cit., p. 176.

[5]Ibid., p. 173.

[6]Lowry, op. cit., p. 106.

[7]James A. Perkins, "Should the Artist Come to the Campus?" Saturday Review, July 17, 1965, p. 54.

[8]Lowry, op. cit., pp. 107-108.

[9]Rockefeller, op. cit., p. 177.

Perkins not only believes that the change in atmosphere is possible, but recommends such a change because he believes that it would benefit the entire university community to undertake the alteration.[10]

Many authors have noted factors in the university atmosphere which appear to be deterrents to the development of the needed "creative atmosphere." Admissions practices which rely on mental ability test scores and high school grades in non-music courses should be re-examined so that students with identifiable artistic potential can be admitted.[11] The curriculums need to be altered so that the student can spend concentrated lengths of time on his principal task.[12] Likewise, the scheduling of classes must have a flexibility which allows for these concentrations of activity.[13] It is also noted in the sources that the hiring of staff should be done without regard to academic degree and publication record, and that the staff members should be selected on the basis of their ability to perform and teach. Lowry is not sure that the atmosphere of a music school can be determined simply in such terms as admissions practices, curriculums, scheduling

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[10]Perkins, op. cit., p. 71.

[11]Rockefeller, op. cit., p. 177.

[12]Lowry, op. cit., p. 108.

[13]Rockefeller, op. cit., p. 177.

and hiring practices. He admits that "the university can change the environment on one part of its campus while holding its traditional atmosphere on another. . . as on the agricultural campus or in the physical education school. . ." but contends that "the requisite atmosphere for professional training in the arts is somewhat more subtle than that in the dairy barns or in the locker rooms."[14]

It appears from the analysis of related literature, which is described in Chapter II, that of all the problems of transplanting the productive atmosphere from the conservatory to the music school of the university, four stand out as most fundamental: (1) admissions, (2) course of study, (3) scheduling, and (4) staff.

The admissions requirements of the university are usually related to the results of standardized tests, high school grades and other non-music criteria. Thus the potential musician may gain or be denied admission to the university on the basis of non-musical criteria. Once the musician has gained admission to the university he may spend the largest part of his time studying non-music subjects and not be able to devote himself to the music subjects which will make him vocationally competent. Even if talented musicians are able to enter the university and

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[14]Lowry, op. cit., p. 107.

pursue a valid course of study, the music school may not be able to offer the student adequate instruction. The inadequacies may be caused by policies of the university as a whole which cannot be waived to accommodate the music department specifically. Such factors might involve the scheduling of courses which leave the student insufficient periods for intense concentration on his work. The faculty may not be adequate for his instruction because they have been selected on the basis of criteria other than their ability to perform and teach.

These problems then arise: (1) Can a school of music of a university be productive if admissions are based on the same standards that are in effect for the other schools of the university? (2) What is a productive course of study for an aspiring orchestral musician? (3) Do scheduling problems inhibit the ability of the university school of music to develop competent musicians? and (4) Do the hiring policies of the university inhibit the acquisition of the most competent staff by the music school?

Statement of the Problem

The problem of the study was to determine whether institutions which produce competent orchestral musicians have developed common elements in their courses of study and sustain administrative factors which impinge on the

effectiveness of either the courses of study or the productive atmosphere. The solution of the problem will require:

(1) A determination of the competencies needed by an orchestral musician.

(2) An analysis of the courses of study which produce these competencies.

(3) An analysis of selected factors which impinge on the productive atmosphere.

Statement of Procedures

The solution to the problem as it was thought to exist was undertaken in the following manner:

(1) Ten music schools which have established reputations for the production of competent orchestral musicians were selected. They were selected on the basis of interviews with professional musicians and formerly professional orchestral musicians who were in a position to know which schools were most productive.

The selection of the schools was made on the basis of a frequency count of the number of times the school was mentioned. Those ten schools most often mentioned were selected as the ten most productive schools. The order of the list was not a consideration.

(2) The courses of study as they appeared in the catalogues of the ten selected schools were then analyzed and the common elements were drawn from them. The method

of analysis was to group the related courses of the various schools into like areas. This grouping of data made it possible to compare the similar course areas between schools. It was necessary to compare course areas rather than specific course offerings, since all schools do not organize their instruction with equivalent courses.

A course area refers either to a group of music courses which are related by similar subjects or to a group of non-music courses which are related in their attempt to add a certain element to the music curriculum.

A common course of study was derived from the courses of study of the selected schools by using the following procedure: A retention point was set at 70 per cent and an element in the curriculum was considered common if it appeared in at least seven of the ten schools. It was assumed that this procedure would provide a more suitable analysis than one which set the retention point at a higher level. Setting the retention point higher would make it possible for the absence of a factor in one or two schools to suspend consideration of an otherwise rather common element.

Once the common elements were determined, the amount of emphasis in these various selected course areas was examined. By again using a retention factor of 70 per cent, the minimum and maximum amount of emphasis in various areas was determined. This emphasis was considered common

if it fell within a range represented by seven of the ten schools. Comparisons were made in terms of "credit hours," and the amount of emphasis was stated in terms of minimum and maximum "credit hour" requirements.

(3) The factors which were thought to impinge on the productive atmosphere were determined. These were selected by an examination of the literature. The literature on this subject, productive atmosphere, was extremely limited and only three sources could be located which dealt with the subject as a whole.[15] The selection of the factors was made on the following bases: (1) The factor was mentioned in all three of the sources and (2) The information on the factors could be gathered from the catalogues and the literature, or by contacting personally the school involved.

(4) The competencies needed by an orchestral musician were gleaned from the literature. A comprehensive compilation was undertaken in 1955 by Everett Timm in his Training Requirements of Musical Careers.[16] The

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[15]The three sources were: W. McNeil Lowry, "The University and the Creative Arts," Educational Theatre Journal, XIV (May, 1962); Rockefeller Brothers Fund, Inc., The Performing Arts: Problems and Prospects, A Rockefeller Panel Report on the future of theatre, dance, music in America (New York: McGraw-Hill Book Company, 1965); and James A. Perkins, "Should the Artist Come to the Campus?" Saturday Review, July 17, 1965.

[16]Everett Timm, "Training Requirements of Musical Careers," (Unpublished Ph.D. dissertation, Eastman School of Music of the University of Rochester, 1955).

remainder of the search of the literature was confined to the intervening 10 years, since it is possible that the list of competencies may have changed in the past decade. Even though the literature mentioned a variety of competencies, Timm appears to provide the most comprehensive list.

These competencies were arranged in tabular form under two categories: (1) Knowledge, and (2) Skills. Each category was divided into two parts: (a) Non-music, and (b) Music.

(5) The competencies which were thought to be needed by a professional musician were then related to the common course of study derived from the analysis of the ten productive schools of music. This was done in order to determine how closely the needs of the student musician were being met by the subject matter offered in the composite course of study. The National Association of Schools of Music definitions or catalogue descriptions of the courses in the various selected schools were used to ascertain whether the competency was represented in the course of study.[17]

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[17]National Association of Schools of Music, By-Laws and Regulations: 1959 (The Author, n.d.), pp. 33-37, and National Association of Schools of Music, Recommendations in Theory, Music History and Literature, Bulletin No. 45 (The Author, January, 1958).

(6) Finally, those factors which were thought to impinge on the productive atmosphere and which had been determined previously were related to the course of study.

Through these procedures the results were summarized. From this summary several conclusions were drawn and finally some recommendations for further research were made.

Delimitation of the Study

The study was limited to the three aspects of the problem: (1) The determination of the competencies needed by an orchestral musician, (2) The analysis of the courses of study which produce these competencies, and (3) The analysis of selected factors which impinge on the productive atmosphere. No attempt was made to determine, develop or analyze any of the other areas of responsibility of the music school.

The study of the impingement of administrative factors on the training of the orchestral musicians was limited to those three factors which appeared to be most prominent: (1) Admissions, (2) Scheduling of Classes, and (3) Hiring of Staff. These factors were not examined in the possible combinations of effects, and other possible factors were not considered.

The judgments were of a general nature and there was no attempt to make a fine differentiation regarding the degree of competence or the degree of effect.

Operational Definitions

"Creative atmosphere" -- that catalyst to high achievement which is present in music schools which are noted for their consistently high quality output of professionally competent performers.

Productive atmosphere -- same as "creative atmosphere" (see above).

Factor -- an element or combination of elements in the administrative pattern or the educational process of a school of higher learning, which could act to inhibit the development of competence in the students in the music school.

School of music -- any American institution designed for the education of performing musicians, whether it be designated a school of music, a department of music, a conservatory or an institute. The school may be either privately or publicly supported, and may be either independent or attached to a university or college.

American conservatory -- a school of music in the United States in which the course of study is designed to develop the present occupational skills of performing musicians. The training is concentrated not only on developing the proficiency of the individual on his instrument, but also on the organized study of the history and stylistic nuances of music. Liberal studies emphasize the arts and languages.

European conservatory -- a school of music in which the instruction is concentrated primarily on developing the proficiency of the individual on his instrument to a high degree. Other principal courses of study are solfeggio and ensemble training. These schools follow the original European pattern, but are not necessarily located only in Europe. Few, if any, liberal courses are offered or required.

Applied music -- private instruction on the major instrument of the student. This instruction is designed to develop in the student a command of all of the techniques of playing the instrument and many of the competencies attached to them.

Music theory -- a course or combination of courses designed to develop the skills of the student in music dictation, sight singing, harmony and counterpoint, and form and analysis.

"Literature and materials of music" -- a course of study which combines the study of music theory, music history and music literature. The title and format of the course were developed in the late 1940's by the faculty of Juilliard School of Music, New York City.

Skills -- the technical skills of applied music, other music subjects and non-music academic subjects.

Competencies -- the abilities to combine skills and knowledge into reasoned behavior.

Selection of the Productive Music Schools

The selection of the ten most productive music schools was made on the basis of the opinions of professional and formerly professional musicians. They were consulted and asked to name the schools which were most known for the production of orchestral musicians, or they were provided with a list of schools which was put together in a previous pilot study and asked to select the most known productive schools and add to the list productive schools that were missing. A copy of this list is provided in Appendix D. Sample phrases from personal letters written to the panel members are recorded in Appendix C. The point "schools most known for their production of orchestral musicians," was stressed. This was to be the primary consideration and other interpretations of "productive schools" were to be disregarded. Hereafter, for the sake of brevity, the professional and formerly professional orchestral musicians will be referred to as "performers" or members of the panel.

The judgments of the performers were relied upon because of the nature of their occupation and the topics of their conversation when making or renewing acquaintances. It is the nature of all performers to trade information concerning experience, background and major teachers. Therefore, they are more aware of the background

of their colleagues than are members of other professions. Caplow and McGee were aware of this exchange of information and commented on it in their book, The Academic Marketplace.

> Wherever a good grapevine is found, as among professional musicians, it is maintained because its participants have something to gain from it and nothing to lose. This is not the case in the academic profession where the grapevine is incomplete and works rather badly.[18]

The judgments of these performers concerning their profession were considered to be far more knowledgeable and accurate than those which could be obtained from a like panel of members of another profession.

The criterion for the selection of the performer was that he must have performed with symphonic orchestras which are not biased in their selection of their personnel because of local union restrictions. Thus the personnel of the orchestra that the performer came to know had been more randomly selected from the pool of musicians available in the United States than would be those found in some orchestras which select their personnel only from the personnel list of the local union of the orchestra. Therefore, the opinion of the performer was not biased by his having associated with graduates of a limited number of schools.

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[18]Theodore Caplow and Reece J. McGee, The Academic Marketplace (New York: Basic Books, Inc., 1958), p. 90.

In addition, an attempt was made to select players whose training and experience did not match that of the other members of the panel. The number of performers selected was set as seven, which is a statistically justifiable number according to Guilford.[19] Increasing the number beyond will not produce a significant increase in the reliability of the data.

Members of the panel were undergraduate degree holders from five different schools: The Eastman School of Music of the University of Rochester, Rochester, New York; Juilliard School of Music, New York, New York; The School of Music of the University of Illinois, Champaign, Illinois; The Oberlin Conservatory of Music of Oberlin College, Oberlin, Ohio; and The Department of Music of Oklahoma State University, Stillwater, Oklahoma. Graduates of Juilliard and Oberlin were represented twice and it was not possible to eliminate this duplication without disturbing the variety of other factors for which the panel was chosen.

The orchestral experience of the panel ranged between two and 27 years. The panel represented a total of 73 years of orchestral experience. The median experience was seven years.

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[19]Jay Paul Guilford, Psychometric Methods (2nd edition, New York: McGraw-Hill, 1954).

A total of 12 orchestras was represented in the experience of the panel. The orchestras were: Baltimore Symphony Orchestra, Baltimore, Maryland; Baton Rouge Symphony Orchestra, Baton Rouge, Louisiana; Boston Symphony, Boston, Massachusetts; Canadian National Ballet Orchestra, Toronto, Canada; Cleveland Orchestra, Cleveland, Ohio; Dallas Symphony Orchestra, Dallas, Texas; Indianapolis Symphony Orchestra, Indianapolis, Indiana; Jacksonville Symphony Orchestra, Jacksonville, Florida; Oklahoma City Symphony Orchestra, Oklahoma City, Oklahoma; National Symphony Orchestra, Washington, D.C.; New Orleans Philharmonic Symphony, New Orleans, Louisiana; and United States Marine Corps Symphony Orchestra, Washington, D.C. The experience that one performer gained with the Canadian National Ballet Orchestra was considered pertinent because the orchestra hires a large number of American musicians and is a touring orchestra with a company which spends a great deal of time in the major cities of the United States.

All of the above orchestras qualify because they hold open auditions and are not restricted in their selection of personnel by local union regulations. Five members of the panel had played in two or more qualifying orchestras. One member of the panel had played in or conducted six qualifying orchestras. One orchestra, Indianapolis, was represented twice and two orchestras, Oklahoma City and National, were represented three times in the sampling, but

in only two cases was more than one member of the panel a member of that orchestra at the same time as another member of the panel.

The performers represented all sections of the orchestra. Two were string players, two were woodwind players, two were brass players, and one was a percussionist.

Four members of the panel are presently performing with qualifying symphony orchestras and the remaining three have retired from orchestral performance only within the past five years.

The selection of the schools was made on the basis of a frequency count of the number of times the school was mentioned. Those ten schools most often mentioned were selected as the ten most productive schools. The order of the list was not a consideration. The results of the tally are shown on Table 1.

The results were as follows: Four conservatories (The Curtis Institute of Music, Philadelphia, Pennsylvania; Juilliard School of Music, New York, New York; The Peabody Conservatory of Music, Baltimore, Maryland; and The New England Conservatory, Boston, Massachusetts), two conservatories which are attached to a college or university (The Eastman School of Music of The University of Rochester, Rochester, New York; and The Oberlin Conservatory of Music of Oberlin College, Oberlin, Ohio) and four schools of

music which are attached directly to large universities (The School of Music of The University of Indiana, Bloomington, Indiana; The School of Music of The University of Illinois, Champaign, Illinois; The School of Music of Northwestern University, Evanston, Illinois; and The School of Music of The University of Michigan, Ann Arbor, Michigan).

TABLE 1

TEN MUSIC SCHOOLS MOST KNOWN FOR THEIR PRODUCTION OF ORCHESTRAL MUSICIANS (AS SELECTED BY A PANEL)

School	Frequency Named
Curtis	7
Eastman	7
Indiana	7
Juilliard	7
Illinois	6
Oberlin	5
New England	5
Michigan	4
Northwestern	3
Peabody	3

CHAPTER II

REVIEW OF THE LITERATURE AND SELECTION OF FACTORS

The factors which were thought to interfere with a productive atmosphere were determined by an examination of the literature. The literature in this area was limited and only three works touch on the subject as a whole: W. McNeil Lowry, The University and the Creative Arts,[1] James A. Perkins, Should the Artist Come to the Campus?[2], and The Rockefeller Panel Report, The Performing Arts: Problems and Prospects.[3]

Review of Literature

The article written by Lowry is the outgrowth of an address he delivered to a meeting of graduate deans. After a few introductory remarks he outlines his impression of the "creative atmosphere" which he believes is a necessary part of every productive fine arts school. He questions whether the university can have a "creative

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[1]Lowry, op. cit.

[2]Perkins, op. cit.

[3]Rockefeller, op. cit.

atmosphere" such as that which is found in a private conservatory, drama school or art school. Nevertheless, he does outline changes which, in his opinion, the university would have to undertake if it hoped to have a fine arts school which would produce competent professional artists. These changes are listed in the second section of this chapter.

Perkins concerned himself with the status of the arts on the university campus in an address at the Cornell Centennial Program at Lincoln Center, New York City. He noted that the arts entered the university curriculum as historical rather than creative subjects, but stated that "once the arts had come into the curriculum as a proper subject for study, neither teachers nor students were long content with this platonic relationship."[4] He accepts the fact that performing artists are now part of the university staff and that students enter the university to study performance with these artists.

Although he believes that "as universities are now organized, the creative artist, both student and teacher, should stick to his garret if he would survive," he counters with the remark that "he [the artist] is there [on campus] to stay, so we had better get to the task of understanding the adjustments that will be required."[5]

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[4]Perkins, op. cit., p. 54.

[5]Ibid.

He then proceeds to outline the changes that should be made in the university administrative patterns to accommodate education in the arts. These changes are outlined in the later part of this chapter.

The Rockefeller Panel Report approaches the problem of university education in the performing arts from a different point of view. It is a report on the state of the arts in the United States and is concerned principally with the preservation and nurturing of the arts. One recommendation is that the private conservatories be subsidized, so that they will survive. It is stated that these institutions must be preserved since they "produce the majority of solo artists and the ensemble musicians who man our finest musical institutions."[6]

On the other hand, the report acknowledges the fact that other schools are taking over the training of artists. Some recommendations are made for changes in administrative structure in these schools so that they may become productive. These suggestions are examined in the next section of this chapter.

Selection of Factors

The first factor in a "creative atmosphere" which Lowry mentioned was the selection of students.[7] He

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[6]Rockefeller, op. cit., p. 176.

[7]Lowry, op. cit., p. 108.

describes at length "the Spartan effect" which acts on both the admission into and the retention of the student in the atmosphere.

His second factor is the course of study, and he immediately makes the point that this course of study "cannot also require. . .all the courses. . .that are even minimally thought to constitute a liberal education."[8]

His third factor is the schedule, and he notes that this schedule must allow extended lengths of time for the student to concentrate on his musical tasks.

After listing these factors, he mentions the need for the hiring of staff on the basis of artistic merit and the need for the students to have an opportunity to receive some kind of apprenticeship. He further recommends that artistic groups be retained in residence on the campus in order to provide the students with professional performances, and to allow them to observe the activities of a professional group at work.[9]

Therefore, the factors which Lowry believes impinge on the course of study are: Admissions, Scheduling, Staff, Apprenticeship, and Professional Performing Groups-In-Residence.

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[8] Ibid.

[9] Ibid., p. 109.

James A. Perkins, the President of Cornell University, Ithaca, New York, does not dwell on his question, "Should the Artist Come to the Campus?", but immediately answers in the affirmative and then proceeds to discuss the factors which must be considered now that the artist has come to the university. His first concern is with the hiring of artists strictly on the basis of their grounding in their disciplines.[10] He then proceeds to discuss admissions practices, the course of study, and the hiring of large performing groups as artists-in-residence in addition to the individual solo artist.[11]

He implies that the administrative pattern of the university inhibits the productivity of the fine arts school. He states "that maybe the university has too quickly applied general rules to all its students and faculty without proper consideration to that precious fraction whose creative genius requires very special handling."[12] His final concern is for a flexibility in scheduling, which will allow periods of concentration for both students and faculty alike.[13]

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[10] Perkins, op. cit., p. 54.

[11] Ibid., pp. 56 and 71.

[12] Ibid., p. 71.

[13] Ibid.

Therefore, the factors which Perkins believes impinge on the course of study are: Admissions, Scheduling, Staff, and Professional Performing Groups-In-Residence.

The Rockefeller Panel Report on the status of the performing arts in the United States states that the university must make "appropriate adjustments in its institutional arrangements," if it hopes to be successful as an educator of professional musicians.[14] The report lists four changes in and one addition to the university pattern. The four changes are: the altering of admissions policies, the development of flexibility in curriculums, the development of flexibility in scheduling classes, and the hiring of performing artists who are good teachers regardless of their academic qualifications.[15] The addition is the providing of a system by which the advanced students could be attached as apprentices to professional organizations.[16]

Therefore, the factors mentioned by The Rockefeller Panel Report which impinge on the course of study are: Admissions, Scheduling, Staff and Apprenticeship.

The results of the search of the literature are diagrammed in Table 2. The factors were selected for this

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[14]Rockefeller, op. cit., p. 176.

[15]Ibid., p. 177.

[16]Ibid.

study on the following bases: (1) the factors were mentioned in all three of the sources, and (2) information on the factors could be gathered from the catalogues and the literature or by contacting personally the schools involved. Therefore, the factors selected were: (1) Admissions, (2) Scheduling and (3) Staff Hiring Practices.

TABLE 2

FACTORS IN A PRODUCTIVE ENVIRONMENT AS MENTIONED IN THE LITERATURE

Factors	Author		
	Lowry	Perkins	Rockefeller
Admissions Requirements	X	X	X
Course of Study	X	X	X
Scheduling of Classes	X	X	X
Staff Hiring Policies	X	X	X
Apprenticeship Opportunities	X		X
Professional Performing Groups in Residence	X	X	

The Course of Study itself, being the factor upon which the other administrative elements impinge, is discussed and analyzed in Chapter IV.

CHAPTER III

THE COMPETENCIES OF AN ORCHESTRAL MUSICIAN

The competencies which were thought to be needed by an orchestral musician were gleaned from the literature. A comprehensive compilation was undertaken in 1955 by Everett Timm in his Training Requirements of Musical Careers.[1] The remainder of the search of the literature was confined to the intervening 10 years, since it was possible that the list of competencies may have changed in the past decade. However, even though the literature mentioned a variety of competencies, Timm appears to have the most comprehensive list.

The competencies as gleaned from the literature have been arranged in tabular form under two categories: (1) Knowledge, and (2) Skills. Each category is divided into two parts: (a) Non-music and (b) Music.

Only in the first area, that concerned with (1) Knowledge (a) Non-music, is more than one possibility listed. This results from the expression of three

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[1] Timm, op. cit., pp. 90-103.

viewpoints which are diverse but not necessarily contradictory.

(1) Knowledge

(a) Non-music

1. no requirement[2]

or

1. languages
2. literature
3. history
4. painting
5. philosophy[3]

or

1. subjects of a general cultural value.[4]

The first listing of "no requirement" recommended by Timm does not include any non-music knowledge beyond that acquired in a high school education or its equivalent.[5]

The second listing was compiled from the results of interviews with members of the Philadelphia Orchestra. Wortman found that the players considered a knowledge of

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[2]Timm, op. cit., p. 103.

[3]Robert Lee Wortman, "The Role of the Liberal Arts in the Training of Stringed Instrument Orchestral Players" (unpublished Ph.D. dissertation, School of Music, Florida State University, 1961), pp. 65-74.

[4]National Association of Schools of Music, By-Laws. . ., p. 21.

[5]Timm, op. cit., p. 103.

languages, literature, history, painting and philosophy to be helpful to their overall musicianship.[6] It was implied that college-level instruction in these areas was the best method of obtaining this knowledge.[7] The Wortman interviews also noted, on the other hand, that there was no substitute for a technical command of the instrument and that the knowledge of subjects of a general cultural value is only a benefit to and not a foundation of orchestral performance.

The third listing is taken from the recommendations of the National Association of Schools of Music, which act as guidelines for the construction of the courses of study in its member schools, and which also recommend graduation requirements for the Bachelor of Music degree. They suggest that the course of study should include a minimum of eighteen and a maximum of thirty-six semester hours in subjects of a "general cultural value."[8]

Therefore, the implication is that knowledge of a general cultural nature would be helpful to the musician but would be in no way a substitute for technical excellence.

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[6]Wortman. op. cit., pp. 65-74.

[7]Ibid.

[8]National Association of Schools of Music, By-Laws. . ., p. 21.

(b) Music

1. Knowledge of all the standard symphonic orchestra repertoire.
2. Knowledge of the terminology used in music.
3. Familiarity with the styles of playing popular music, light opera, and jazz.
4. Knowledge of acoustical principles underlying performance.
5. Knowledge of the history of music and the styles of performance according to historical periods and composers.
6. Acquaintance with musical forms.
7. Pedagogy of the applied instrument.

This tabulation was made by Timm. Nothing written in the intervening ten years alters this tabulation although the wording of item three, "Familiarity with. . .light opera. . .," would be more current if "musical theatre" were substituted for "light opera."

Current literature only reiterates the seven items compiled by Timm. Among those who, by their opinions, lend support to his views is conductor Erich Leinsdorf. He points out that the notes on the printed page can only be an indication to the trained musician, who must then translate them into the style dictated by the period.[9] The musician must be aware of the various styles that he will

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[9]Erich Leinsdorf, "Musical Notation is Relative," Music Journal, XXII, No. 9 (December, 1964), pp. 27-28.

be called upon to reproduce.[10] Bram Smith feels that a performer must be able to change styles in order to be eligible for maximum employment. Such a skill might be required, for instance, in his going directly from a symphony rehearsal to a dance band job.[11] Regarding repertoire, Alan Rich urges that training and experience in this line be accomplished on the student level.[12] In the opinion of George Szell, conductor and musical director of the Cleveland Orchestra, musicians must be taught the standard repertoire as students in order to be prepared for their profession.[13]

Thus, knowledge in areas musical is considered fundamental to being a competent orchestral musician.

(2) Skills

(a) Non-music

1. Those skills thought to be developed by a high school education.[14]

No further information, except the references to a high school education, was available from the search of

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[10]Putnam Aldrich, "Musical Performance as a Humanistic Study," College Music Symposium, IV (Fall, 1964), p. 56.

[11]Bram Smith, "Training for Reality," Music Journal, XXIII, No. 1 (January, 1965), p. 46.

[12]Alan Rich, Careers & Opportunities in Music (New York: E. P. Dutton and Co., Inc., 1964), p. 26.

[13]Max Aronoff, "Let's Save the Strings," Music Journal, XXII, No. 1 (January, 1964), p. 58.

[14]Timm, op. cit.

the literature. American musicians are not thought to gain any advantage from shortening their high school education and going to the conservatory before graduation, as is the European custom. On the other hand, the attendance at a comprehensive public high school by the musician is not recommended either. The Curtis Institute of Music accepts Wunderkinder at a very early age, and the New York High School of Music and Art and the Interlochen Arts Academy accept students after they have completed eight grades of public school.

There is thought to be an advantage in attending these schools rather than a comprehensive public school, although all three schools mentioned above offer work in non-music skills and all award high school diplomas when the requirements in these skills are satisfied.

(b) Music

1. Command of basic skills and techniques of the instrument.
2. Ability to play in tune with others.
3. Control of tone quality.
4. Control of vibrato.
5. Ability to phrase and play musically.
6. Ability to sight read.
7. Ability to transpose
8. Ability to hear harmonic progressions.
9. Ability to write harmony.
10. Ability to sight sing.
11. Ability to write counterpoint,

demonstrate analytical technique, orchestrate and compose.[15]

No disagreement could be found with numbers (1) through (7) in the above list of musical skills compiled by Timm. The mastery of them is fundamental to orchestral competence. However, items (8) through (11) are presently under attack by musicians who contend that these skills are not a necessary and valid part of the education of a musician.[16] The development of these skills is still firmly entrenched in music education. This can be seen by an examination of recently-published music theory textbooks and the courses of study of schools of music. They assume that there is a transfer of learning between sight singing and music dictation. There is also the assumption that practice will develop the ability of the student to take melodic and harmonic dictation and this will in turn help his sight-singing ability.

However, the results of recently-completed research indicate that possibly all of the above assumptions are false. Spohn has found that the method of presenting notational elements and the method of responding to this

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[15]Timm, op. cit., pp. 90-103.

[16]David Kraehenbuehl, "On the Nature and Value of Theoretical Training: A Forum," Journal of Music Theory, III (April, 1959), p. 31.

stimulus varies in effectiveness from person to person.[17] In the application for his present research Spohn stated "that for some elements of music perception, one stimulus is more useful than another," that "the best learning situation related to rhythm is unknown," and that "interval training. . .for some students carries over to other forms of interval presentation; for other students, the skill does not carry over."[18]

Relative to this point, Timm notes that the graduates of Curtis have an impressive command of a European system of solfeggio and are also excellent sight readers, but he points to the fact that European musicians do not sight read well even though they were trained with the same sight-singing system. He postulates that the sight-reading ability of the Curtis students is probably more easily attributed to the caliber of students at the institute than to the method of solfeggio used.[19]

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[17]Charles L. Spohn, An Evaluation of Two Methods Using Magnetic Tape Recordings for Programed Instruction in the Elemental Materials of Music (Columbus, Ohio: The Ohio State University Research Foundation, 1964), p. 97.

[18]Charles L. Spohn, "A Comparison between Different Stimuli Combined with Two Methods for Providing Immediate Knowledge of Results in Learning the Elemental Materials of Music," an Application to the Commissioner of Education, United States Office of Education. . .for a Grant to Support a Research Project under the Provisions of Title VII of the National Defense Education Act of 1958 (P.L. 85-864) (Columbus, Ohio: The Ohio State University Research Foundation, 1963), p. 3. (Lithographed).

[19]Timm, op. cit., p. 100.

Langsford tested the assumption that practice affected improvement in melodic dictation and concluded after two attempts that "no significant statistical relationship existed between the amount of time spent in practicing melodic dictation and improvement."[20] Therefore, if practice does not affect improvement, the present methods of teaching melodic dictation are suspect and the real source of improvement is unknown. Thirty years ago Ortmann found that "problems in ear-dictation are not auditory but visual."[21] Consequently, the sight singing and ear training skills which are thought to be developed in the music theory class are probably being developed outside of this class.

At the moment, the criticism of items (8) through (11) in Timm's list and the data to support these criticisms do not appear to be adequate justification for the elimination of these items as competencies. It is possible, however, that they should be re-examined in the future.

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[20]Harry Marble Langsford, "An Experimental Study of the Effect of Practice upon Improvement in Melodic Dictation" (unpublished Ph.D. dissertation, Michigan State University, 1959), as reviewed in Council for Research in Music Education (Urbana, Illinois: College of Education, University of Illinois), Bulletin No. 5 (Spring, 1965), p. 24.

[21]Otto Ortmann, "Problems in the Elements of Ear-Dictation," Research Studies of Music (Baltimore, Maryland: Peabody Conservatory of Music, 1934), p. 95.

Combining all of the competencies listed above into a relationship is the matter of professional routining. For a musician to be considered professionally routined, he must be musically reliable.[22] Having the appropriate knowledge and not applying it all of the time would make him vocationally incompetent. Knowing how to play his instrument, but not being able to perform consistently, would also make him vocationally incompetent. According to Timm, a musician who is professionally routined does not miss entrances, is accurate in the subdivision of the rhythmic pulse, plays in tune, and is conscious of the niceties of proper balance and tonal balance. This ability encompasses the skills previously listed, and the lack of this ability negates all of these competencies.

Summary

In summary it can be stated that an orchestral musician will benefit from collegiate-level instruction in courses of a general cultural value or, more specifically, courses in languages, literature, history, painting and philosophy. This knowledge can in no way make up for deficiencies in knowledge which relates directly to performance. Knowledge in musical areas is considered most important. These areas of knowledge are: (1) Standard

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[22]Timm, op. cit., p. 93.

symphonic orchestra repertoire, (2) Musical terminology, (3) Popular music styles, (4) Acoustics of musical instruments, (5) Music history and historical styles of performance, (6) Musical forms, and (7) Pedagogy of the major applied instrument.

The skills needed by an orchestral musician in non-music areas are thought to be developed sufficiently by a high school education.

The skills of a musical nature are: (1) Command of basic skills and techniques of the instrument, (2) Ability to play in tune with others, (3) Control of tone quality, (4) Control of vibrato, (5) Ability to phrase and play musically, (6) Ability to sight read, (7) Ability to transpose, (8) Ability to hear harmonic progressions and to take melodic and harmonic dictation, (9) Ability to write harmony, (10) Ability to sight sing, (11) Ability to write counterpoint, demonstrate analytical technique, orchestrate and compose.

These individual skills and this knowledge cannot stand alone, nor can they be combined only in part in the vocationally competent musician. Being professionally routined is the quality of a musician to be musically reliable. This ability relates all of the knowledge and skills into competencies and the musician is vocationally incompetent if he lacks this quality in the proper degree. Professional routining is a paramount feature in the

education of a musician. When he has this quality he not only has the necessary knowledge and skills, but exhibits them consistently.

CHAPTER IV

THE ANALYSIS OF THE COURSES OF STUDY OF THE SELECTED SCHOOLS OF MUSIC AND THE DERIVATION OF A COMMON COURSE OF STUDY

The courses of study as they appeared in the catalogues of the ten selected schools were analyzed and the common elements were drawn from them. The method of analysis was to group the courses of the various schools into like areas. This grouping of data made it possible to compare course areas between schools. It was necessary to compare course areas since in most cases it was not possible to compare specific course offerings.

A course area refers either to a group of music courses which are related by similar subjects or to a group of non-music courses which are related in their attempt to add a certain element to the music curriculum. The course areas represented in this chapter are as follows: Applied Music; Piano Study; Music Theory; Music History; Music Electives; Ensemble Training; Recitals or Appearances in Solo Public Performance; Non-music Academic Subjects; Non-music, Non-academic Subjects.

In addition, three composite compilations have been listed: Total Number of Credit Hours Required in Non-performance Music Subjects; Total Non-music Academic Hours Required Plus All Hours in Music Subjects Beyond Basic Courses, and Total Credit Hours in the Course of Study for Orchestral Musicians.

A common course of study was derived from the courses of study of the selected schools by using the following procedure: A retention point was set at 70 per cent and an element in the curriculum was considered common if it appeared in at least seven of the ten schools. It was assumed that this procedure would provide a more suitable analysis than one which set the retention point at a higher level. Setting the retention point higher would make it possible for the absence of a factor in one or two schools to suspend consideration of an otherwise rather common element.

Once the common elements were determined, the amount of emphasis in these various selected course areas was examined. By again using a retention factor of 70 per cent, the minimum and maximum amount of emphasis in various areas was determined. This emphasis was considered common if it fell within a range represented by seven of the ten schools. Comparisons were made in terms of "credit hours," and the amount of emphasis was stated in terms of minimum and maximum "credit hour" requirements.

The procedures outlined above for deriving a common course of study by using the 70 per cent retention factor will be in evidence throughout this chapter. For the sake of conciseness and readability these procedures will be referred to in the text as the "guidelines."

Applied Music

As is shown in Table 3, all of the schools require applied music in every semester of a four-year course of study. The school that appears to demand the most emphasis in applied music is Curtis, but it should be noted that the catalogue has grouped the credit hours for applied private lessons along with small ensemble and orchestra into one group. Therefore, it is impossible to determine, from the data used, exactly how much credit is awarded in private instruction alone.

The two schools which award the least amount of credit for applied study are Illinois and Michigan, with a total of 32 hours each. Peabody awards only slightly more credit, with 34 hours total.

It can be stated on the basis of the compilation in Table 3, and by the application of the guidelines of this page, that private applied music on the major instrument is required in each semester of the residence of the student. It can also be stated that on the average at least four hours and not more than five hours credit are awarded per semester.

TABLE 3

APPLIED MUSIC REQUIRED IN THE SELECTED SCHOOLS

School	Credit Hours	Semesters Required	Average Number of Credit Hours per Semester
Juilliard	40	8	5
New England	40	8	5
Curtis	60[a]	8	7.5[c]
Peabody	34	8	4.25
Eastman	40	8	5
Oberlin	36	8	4.5
Indiana	48	8	6
Illinois	32	8	4
Northwestern	36[b]	8[b]	4.5[b]
Michigan	32	8	4

[a]Combined total of private applied music and large and small ensemble credit.

[b]Equated in semester hours.

[c]Also includes ensemble.

Piano Study Required as a Secondary Instrument

As is shown in Table 4, all of the selected schools require orchestral instrumentalists to study piano as a secondary instrument. All of the schools, except Curtis and Northwestern, state the required study in terms of both credit hours and semesters required. These remaining eight schools vary widely in their requirements. Using the guidelines, it was difficult to select common elements.

TABLE 4

PIANO STUDY REQUIRED IN THE SELECTED SCHOOLS

School	Total Credit Hours	Semesters of Study	Credit per Semester
Juilliard	8	4	2
New England	4	4	1
Curtis	not defined	2[a]-4[b]	-
Peabody	4	4	1
Eastman	8	4	2
Oberlin	4	2	2
Indiana	8	4	2
Illinois	8	4	2
Northwestern	not defined	proficiency required	-
Michigan	8	4	2

[a]Required for woodwind, brass and percussion players, but proficiency can be established and the player may be excused from study.

[b]Required for all string and harp players, but proficiency can be established and the player may be excused from study.

It can be stated that all schools, except Oberlin, Curtis and Northwestern, expect their orchestra instrument majors to study piano for four semesters. Using the guidelines of page 40, it can be stated only that all of them, except Curtis and Northwestern, award credit at least at the rate of one credit hour per semester.

Music Theory Study Required

As is shown in Table 5, all of the schools require their orchestral instrumentalists to study music theory. The minimum requirement is 16 credit hours at Eastman. Juilliard appears to require the most music theory, 40 hours, but, as footnoted, this total also includes the study of music history. The study of music theory and music history are combined in a course entitled "The Literature and Materials of Music." If the music history section of the course is considered to take up about 10 to 12 hours -- the average of music history requirements as shown by Table 6 -- then the music theory requirement at Juilliard can be estimated at between 28 and 30 hours.

Therefore, it can be stated that all of the schools require the study of music theory. Further, it can be stated by using the guidelines that at least 22 hours and not more than 30 hours of credit are required in this area.

Music History Study Required

As is shown on Table 6, all of the schools, except Curtis, require the orchestral instrumentalists to study music history. Juilliard includes the study of music history in their course entitled "The Literature and Materials of Music"; however, it can be estimated that the music history portion of the course consumes at least 10 to 12 hours of the total credit hours.

TABLE 5

MUSIC THEORY REQUIRED IN THE SELECTED SCHOOLS

School	Credit Hours
Juilliard	40[a]
New England	30
Curtis	30
Peabody	32
Eastman	16
Oberlin	22
Indiana	23
Illinois	23
Northwestern	22[b]
Michigan	20

[a]Also includes the study of music history and is combined in a course entitled "The Literature and Materials of Music."

[b]Equated in semester hours.

According to the guidelines being used, it can be stated that at least 10 hours and not more than 12 hours credit in music history are required for orchestral instrumentalists.

Music Electives Required

As is shown in Table 7, there is a wide variation regarding music electives in the courses of study for orchestral musicians in the selected schools. Curtis, Peabody, Indiana and Michigan do not require any electives

at all. Three of the schools have a set number. Juilliard and New England require 12 credit hours and Illinois requires 25 credit hours of music electives. Eastman, Oberlin and Northwestern have requirements which vary in relationship to the number of credit hours taken in non-music courses or the amount of ensemble credit hours elected or assigned.

TABLE 6

MUSIC HISTORY REQUIRED IN THE SELECTED SCHOOLS

School	Credit Hours
Juilliard	40[a]
New England	12
Curtis	0
Peabody	10
Eastman	12
Oberlin	10
Indiana	12
Illinois	12
Northwestern	10[b]
Michigan	14-15

[a]Also includes the study of music theory and is combined in a course entitled "The Literature and Materials of Music."

[b]Equated in semester hours.

Using the guidelines set, it is not possible to state the number of credit hours in music electives required in terms of minimums or maximums. In fact, it

can be stated that music electives are not necessary in the education of orchestral musicians.

TABLE 7

MUSIC ELECTIVES REQUIRED IN THE SELECTED SCHOOLS

School	Credit Hours
Juilliard	12
New England	12
Curtis	0
Peabody	0
Eastman	6-12
Oberlin	12-24
Indiana	0
Illinois	25
Northwestern	22-26[a]
Michigan	0

[a]Equated in semester hours.

Total Number of Credit Hours Required in Non-Performance Music Subjects

As is shown in Table 8, all of the schools require orchestral instrumentalists to pursue a course of study which contains at least 30 credit hours of work in non-performing music subjects. Curtis, Eastman, Indiana and Michigan require a total of 35 or less credit hours in non-performance music subjects. Juilliard, New England, Oberlin and Northwestern may, under certain conditions, require 52 credit hours or more in music subjects of a

non-performance nature. This number may be reduced if the student elects to take courses of a non-music nature or is assigned to ensemble for the number of hours allowed.

TABLE 8

TOTAL NUMBER OF CREDIT HOURS REQUIRED IN NON-PERFORMANCE MUSIC SUBJECTS

School	Music Theory	Music History	Music Electives	Total
Juilliard	40[a]	-	12	52
New England	30	12	12	54
Curtis	30	0	0	30
Peabody	32	10	0	42
Eastman	16	12	6-12	34-40
Oberlin	22	10	12-24	44-56
Indiana	23	12	0	35
Illinois	23	12	25	60
Northwestern	22[b]	10[b]	22-26[b]	54-58[b]
Michigan	20	14-15	0	34-35

[a]Also includes the study of music history.

[b]Equated in semester hours.

Using the guidelines, it is possible to state that the minimum requirement in non-performance music subjects is 35 credit hours and that the maximum is 54 credit hours.

Ensemble Training

As is shown in Table 9, the amount of credit awarded for ensemble training varies among the selected schools. Curtis does not define the credit hours for

TABLE 9

ENSEMBLE TRAINING REQUIRED IN THE SELECTED SCHOOLS

School	Credit Hours in Large Ens.	Credit Hours in Small Ens.	Comments
Juilliard	6-24 (if assigned)	6-24 (if assigned)	electives make up for hours in ensemble not assigned
New England	0-8 (if assigned)	0-8 (if assigned)	electives make up for hours in ensemble not assigned.
Curtis	not defined	not defined	ensemble assignment and granting of credit included in total of applied music which is 60 hrs.
Peabody	8	4	
Eastman	8	3	
Oberlin	4-8	4-8	a minimum of 12 hours of ensemble required, at least 4 in small and at least 4 in large ensembles
Indiana	12	4	
Illinois	0	2	large ensemble required as assigned, no credit awarded
Northwestern	0	8[a]	4 years of large ensemble required
Michigan	16	8	

[a]Equated in semester hours

ensemble, and includes them instead in the total credit awarded for applied music. Training in large ensembles is required for four years at Illinois and Northwestern, but no credit is awarded for this training. The credit awarded for ensemble training at Juilliard, New England and Oberlin varies according to whether the student is assigned to ensemble training, either large or small. The largest and most rigid requirement, as measured in credit hours, is found in the course of study at Michigan, which requires 16 credit hours of large ensemble and 8 credit hours of small ensemble training.

According to the guidelines established, it can be stated that all of the selected schools require ensemble training, but it is not possible to set minimum or maximum limits on the amount of training as measured in credit hours.

Recitals or Appearances in Solo Public Performance

As is shown in Table 10, the requirement for recital performance or solo public performance varies among the selected schools. Juilliard, Curtis, New England and Eastman do not require orchestral instrumentalists to appear in solo public performances. The remaining six schools require at least one full-length public recital, and Indiana requires two solo recitals. None of the schools except Indiana award any credit for these

recitals. Indiana awards one credit hour for each of the two recitals. Peabody requires four public solo appearances and Oberlin requires one public solo appearance before the recital is scheduled and performed. These solo appearances require the student to perform one composition of from five to ten minutes in length. The recital should be up to one hour in length.

TABLE 10

RECITAL REQUIRED AND THE CREDIT AWARDED IN THE SELECTED SCHOOLS

School	Number of Recitals Required	Credit Awarded
Juilliard	none	-
New England	none	-
Curtis	none	-
Peabody	1[a]	none
Eastman	none	-
Oberlin	1[b]	none
Indiana	2	1 hour each
Illinois	1	none
Northwestern	1	none
Michigan	1	none

[a]Plus four appearances on student recitals previous to this.

[b]Plus one appearance on student recitals previous to this.

According to the guidelines established, it can be stated that a required recital is not a part of the common course of study.

Total Non-Music Academic Hours Required Plus All Hours in Music Subjects Beyond Basic Courses

As is shown in Table 11, half of the courses of study of the selected schools are courses which are non-music, non-performing music and performing beyond the acquisition of basic skills. For the purposes of comparison, music history was considered an academic course, music electives were considered to be academic courses, and music theory beyond the first 16 credit hours and applied music beyond the first 40 hours were considered academic. Academic courses are thus defined not only as those courses which are normally considered essential to a liberal education, but also as those courses which demand a high level of intellect and are studied in a depth beyond the accomplishment of basic skills.

According to the guidelines, it can be stated that the total number of credit hours required in non-music courses, non-performing music courses and advanced applied music study for an orchestral musician are not less than 55 credit hours and not more than 68 credit hours.

Non-music Academic Subjects Required

As is shown in Table 12, all of the selected schools require not more than 30 credit hours and not less than 24 credit hours in non-music academic courses. Juilliard, New England, Curtis, Northwestern and Michigan

TABLE 11

TOTAL ACADEMIC HOURS REQUIRED PLUS ALL HOURS IN MUSIC SUBJECTS BEYOND BASIC COURSES IN THE SELECTED SCHOOLS

School	Academic Hours	Music History	Music Electives	Music Theory Beyond First 16 Hours	Music Theory Beyond First 40 Hours	Total
Juilliard	30	20[a]	12	4[b]	-	66
New England	30	-	12	26	-	68
Curtis	30	-	-	14	12	56
Peabody	29	10	-	16	-	55
Eastman	24	12	6-12	-	-	42-48
Oberlin	28	10	12-24	6	-	56-70
Indiana	26	12	-	7	8	53
Illinois	24	12	25	7	-	68
Northwestern	30[c]	10[c]	22-26[c]	6[c]	-	68-72[c]
Michigan	30	14-15	-	4	-	48-49

[a]Derived by an equal division of the Literature and Materials of Music course, which includes both music theory and music history.

[b]Derived by subtracting 16 from the remainder of the division as described in footnote a.

[c]Equated in semester hours.

TABLE 12

NON-MUSIC ACADEMIC SUBJECTS REQUIRED
IN THE SELECTED SCHOOLS

School	Total	English Grammar and Composition	English Literature	Foreign Language	History	Psychology	Sociology
Juilliard	30	3	3	-	6	3	3
New England	30	6	12	12	-	-	-
Curtis	30	-[a]	-[a]	-[a]	-[a]	-[a]	-[a]
Peabody	29	6	6	12	-	3	2
Eastman	24	3	3	-	-	-	-
Oberlin	24	3	3	-	-	-	-
Indiana	26	4	-	-	-	-	-
Illinois	24	6-8	-	8	-	-	-
Northwestern	30[b]	6[b]	-	-	-	-	-
Michigan	30	6	-	-	-	-	-

[a]Breakdown not listed specifically in catalogue.

[b]Equated in semester hours.

require 30 credit hours of non-music academic subjects. Eastman, Oberlin and Illinois require only 24 credit hours of non-music academic subjects. In two of the selected schools, New England and Peabody, the non-music academic subjects to be studied are named specifically. In the majority of the schools, specific assignments of non-music

academic requirements are made in only a few subject areas.

Using the guidelines set, it can be stated that the selected schools require not more than 30 credit hours but at least 26 credit hours of non-music academic subjects. It can also be stated that except for a few basic courses, specific subjects are not named in the requirements.

Non-Music Academic Subjects Required--By Area

As is shown in Table 13, all of the selected schools except Curtis require at least 6 credit hours of academic work in the area of humanities. Juilliard, Peabody and Indiana require that some of the academic work be done in the area of the social sciences. Indiana is the only school that requires work in the area of the natural sciences.

Using the guidelines, it can be stated that at least six credit hours of academic work are required in the area of the humanities. Further, it can be stated that academic work in the areas of the social and natural sciences is not required.

Non-Music, Non-Academic Subject Requirements

As is shown in Table 14, Juilliard, New England, Curtis and Peabody do not have any non-music, non-academic subject requirements. All of the other schools have a physical education requirement, and Indiana has,

in addition, an ROTC requirement. Eastman, Oberlin and Illinois require four semesters of physical education. Indiana, Northwestern and Michigan require physical education for two semesters only. ROTC training for men at Indiana must be taken for four semesters.

TABLE 13

NON-MUSIC ACADEMIC SUBJECTS REQUIRED IN THE SELECTED SCHOOLS (GROUPED INTO MAJOR AREAS)

School	Total	Minimum Required in Each Area		
		Humanities	Social Sciences	Natural Sciences
Juilliard	30	9	9	none
New England	30	30	none	none
Curtis	30	none	none	none
Peabody	29	24	5	none
Eastman	24	6	none	none
Oberlin	24	6	none	none
Indiana	26	9-10	5-6	5
Illinois	24	14-16	none	none
Northwestern	30	9[a]	none[b]	none[b]
Michigan	30	6	none	none

[a]Equated in semester hours.

[b]Election of the general education requirement will allow the student to avoid either social science or natural science, but he must take at least the equivalent of 6 semester hours in one of the areas.

TABLE 14

NON-MUSIC, NON-ACADEMIC SUBJECTS REQUIRED IN THE SELECTED SCHOOLS

Schools	Subjects	Semesters Required
Juilliard	none	-
New England	none	-
Curtis	none	-
Peabody	none	-
Eastman	Phys. Educ.	4
Oberlin	Phys. Educ.	4
Indiana	Phys. Educ.[a] men	2
	ROTC	4
	Phys. Educ.[b] - women	2
Illinois	Phys. Educ.	4
Northwestern	Phys. Educ.	2[c]
Michigan	Phys. Educ.	2

[a]Marching band may be substituted during marching season.

[b]Modern dance may be substituted.

[c]Quarter system equated in semesters.

According to the guidelines used, the common course of study will not require physical education, ROTC, or any other non-music, non-academic subject.

Total Credit Hours

As is shown in Table 15, the selected schools have a total credit hour requirement in their course of study

for educating orchestral musicians which ranges from a low of 120 to a high of 142 credit hours. Curtis, Oberlin and Northwestern have total credit hour requirements below 125 credit hours. Indiana has the highest total credit hour requirement, 142, but the next highest total credit hour requirement, 136, is held by three schools: Juilliard, Oberlin and Eastman.

TABLE 15

TOTAL NUMBER OF CREDIT HOURS IN THE COURSE OF STUDY FOR ORCHESTRAL MUSICIANS IN THE SELECTED SCHOOLS

School	Total Credit Hours Required
Juilliard	136
New England	128
Curtis	120
Peabody	125
Eastman	136
Oberlin	124-136
Indiana	142
Illinois	130
Northwestern	124[a]
Michigan	128-129

[a]Equated in semester hours.

Therefore, when the guidelines are applied, the maximum total credit hour requirement is set at 136 credit hours. Also, according to the guidelines, it can be

stated that the course of study will require not less than 125 credit hours as the total number of hours. It can also be stated that the total course of study will not contain more than 136 credit hours as a requirement for graduation.

Derived Common Course of Study

As a result of the analysis procedures described above, a common course of study was derived. Its content is shown in tabular form in Table 16.

TABLE 16

COMMON COURSE OF STUDY

Courses	Semesters	Credit Hours
Applied Major Instrument	8	4-5
Piano	2-4	1-2
Music Theory	-	22-30
Music History	-	10-12
Music Electives	0	0
Non-Performance Music Subjects	-	35-54
Ensemble Training	*	*
Non-Music Subjects	-	26-30
Non-Music, Non-Academic Subjects	0	0

*Essential but not necessarily measured in number of semesters or credit hours required.

Summary

The courses of study as they appeared in the catalogues of the ten selected schools were analyzed and common elements were drawn from them. The method of analysis was to group the courses of the various schools into like areas. This grouping of data made it possible to compare the similar course areas between schools. It was necessary to compare course areas since in most cases it was not possible to compare specific course offerings.

A course area refers either to a group of music courses which are related by similar subjects, or to a group of non-music courses which are related in their attempt to add a certain element to the music curriculum.

A common course of study was derived from the courses of study of the selected schools. The procedure used was to set the retention point at 70 per cent, and an element of the curriculum was considered common if it appeared in at least seven of the ten schools. It was assumed that this procedure would provide a more suitable analysis than one which set the retention point higher. Setting the retention point at a higher level would make it possible for the absence of a factor in one or two schools to suspend consideration of an otherwise rather common element.

Once the common elements were determined, the amount of emphasis in these various selected course areas was examined. By again using a retention factor of 70 per cent, the minimum and maximum amount of emphasis in various areas was determined. This emphasis was considered common if it fell within a range represented by seven of the ten schools. Comparisons were made in terms of "credit hours" and the amount of emphasis was stated in terms of minimum and maximum "credit hour" requirements.

The procedures described above for deriving the common course of study are referred to as "guidelines."

By using the guidelines it was determined that the common course of study will include the equivalent of eight semesters of applied music on the major instrument of the orchestral musician, with at least four and not more than five credit hours awarded per semester. The instrumentalists will be required to study piano as a secondary instrument for a minimum of two and a maximum of four semesters. One to two credit hours will be awarded per semester. Music theory will be a requirement for at least 22 credit hours and not more than 30 credit hours. Likewise, the study of music history will be required for at least 10 credit hours and not more than 12 credit hours.

By using the guidelines in the analysis of the music electives, it was determined that music electives are not necessary in the education of orchestral musicians. The total number of credit hours in non-performance music subjects for the common course of study can be set at not less than 35 hours and not more than 54 hours.

Ensemble training is included in the course of study for orchestral instrumentalists in all of the schools, but it is not possible to set minimum or maximum limits on the amount of training as measured in credit hours. Solo performance recitals will not be a part of the common course of study for an orchestral musician.

All of the schools have courses of study which require at least half of the credit hours to be taken in subjects which are either non-music, non-performing music, or performance beyond the acquisition of basic skills. The non-music subjects in the common course of study will consume at least 26 credit hours and not more than 30 credit hours. Except for a few basic courses, no specific non-music subjects are required.

By using the guidelines, the analysis of the non-music subjects by areas showed that at least six credit hours are to be taken in the humanities and that no credit hours are required in the common course of study determined by the guidelines.

CHAPTER V

THE COMPETENCIES OF AN ORCHESTRAL MUSICIAN AS RELATED TO THE DERIVED COMMON COURSE OF STUDY

The competencies which were thought to be needed by a professional orchestral musician were then related to the common course of study derived from the analysis of the ten productive schools of music. This was done in order to determine how closely the needs of the student musician were being met by the subject matter offered in the common course of study.

These relationships were examined in the same order in which the competencies and skills were outlined in Chapter III. The two general categories of that chapter were: (1) Knowledge, and (2) Skills. Each category was divided into two parts: (a) Non-music, and (b) Music.

(1) Knowledge

(a) Non-music

1. no requirement[1]

or

1. languages

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[1]Timm, op. cit., p. 103.

2. literature
3. history
4. painting
5. philosophy[2]

or

1. subjects of a general cultural value.[3]

If, as stated by Timm in (a) Non-music, 1. no requirement, no knowledge of collegiate non-music academic subjects is needed by the orchestral musician, there is no problem relating competency to the course of study.

In the second recommendation, gleaned from the Wortman interviews, these five non-music academic competencies are only partially represented in the common course of study. Languages are represented only by English, and although some of the selected schools do have foreign language requirements, the frequency of the foreign language requirement was not high enough to be included in the common course of study.

If the NASM guide, which requires courses of a "general cultural value," is followed there is still no difficulty. The common course of study contains at least 24 credit hours with a minimum of six hours in the humanities. This 24 hour minimum exceeds the NASM minimum of 18 hours by six credit hours.

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[2]Wortman, op. cit., pp. 65-74.

[3]National Association of Schools of Music, By-Laws. . ., p. 21.

Therefore, the minimum required competencies in non-music knowledge are adequately represented in the common course of study.

(b) Music

1. Knowledge of all the standard symphonic orchestra repertoire.
2. Knowledge of the terminology used in music.
3. Familiarity with the styles of playing popular music, light opera and jazz.
4. Knowledge of acoustical principles underlying performance.
5. Knowledge of history of music and the styles of performance according to historical periods and composers.
6. Acquaintance with musical forms.
7. Pedagogy of applied instrument.

The applicability of the above list, which was developed by Timm, has not changed since it was written. "Musical theatre," however, should be substituted for "light opera," the former being more meaningful in modern circumstances and terminology.

The course descriptions of the common course of study developed in the previous chapter include some of the music items listed above and exclude the remaining ones. Within the NASM definitions of applied music, orchestra, music theory and music history are included in the study of (1) Knowledge of all the standard symphonic orchestra repertoire, (2) Knowledge of the terminology used in music, (5) Knowledge of history of music and the

styles of performance according to historical periods and composers, and (6) Acquaintance with musical forms. The jurisdiction of each area is impossible to define. The study of orchestral literature may take place either in applied music, in orchestra or in music theory. The knowledge of musical terminology will be under consideration in applied music, orchestra, music theory and music history. Knowledge of music history is not acquired simply from the study of music history, but is found within the domain of each of the four areas listed above. Likewise, the teaching of performance according to historical styles is also divided among the four areas of study. Acquaintance with musical forms is listed as a music theory study, but is an integral part of the study of music history and is also discussed in applied music and orchestra.

Those items of music knowledge that are considered necessary for an orchestral musician but which are not included in the common course of study are (3) Familiarity with the styles of playing popular music, musical comedy and jazz, (4) Knowledge of acoustical principles underlying performance, and (7) Pedagogy of applied instrument. Pedagogy classes are part of the courses of study of some of the individual schools, but are not found in a number sufficient to include them in the composite course of study. The study of musical acoustics is sometimes

included as a part of the first music theory courses, but is not listed in a number large enough to be included in the composite. The study of performance styles of popular music or jazz is not included in the courses of study of any of the individual schools.

Thus, the derived common course of study includes most of the items on the competency list of music knowledge. The study of standard symphonic orchestra repertoire, the terminology used in music, music history and the styles of performance and musical forms are the items included. The study of playing popular music and jazz, acoustical principles of music, and the pedagogy of applied music are not included.

(2) Skills

(a) Non-music

1. Those skills thought to be developed by a high school education.

All of the schools in the study except Curtis expect their applicants to be high school graduates. Curtis makes provision for the admission of Wunderkinder, provides tutors, and grants a high school diploma when the requirements have been met. All of the other schools, although they do not offer high school courses, can admit persons who do not have a high school diploma. These nine schools can grant high school equivalency to qualified applicants. However, these students would be older when admitted than some of those entering Curtis.

No evidence is found in the literature that the music school applicant needs more non-music skills than would be developed by a high school education. On the contrary, the admissions requirements of the selected schools tend to indicate that an education in a comprehensive high school is not needed. Curtis admits students and provides them with a segregated education in non-music skills, which is believed to benefit the musical accomplishment of the student.

(b) Music

1. Command of basic skills and techniques of the instrument.
2. Ability to play in tune with others.
3. Control of tone quality.
4. Control of vibrato.
5. Ability to phrase and play musically.
6. Ability to sight read.
7. Ability to transpose.
8. Ability to hear harmonic progressions and to take melodic and harmonic dictation.
9. Ability to write harmony.
10. Ability to sight sing.
11. Ability to write counterpoint, demonstrate analytical technique, orchestrate and compose.

In addition to the skills listed above, Timm lists professional routining as a fundamental all-inclusive skill.[4] Being professionally routined is the quality of

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[4]Timm, op. cit., p. 100.

a musician to be musically reliable.[5] This quality relates all of the knowledge and skills into competencies, and the musician is vocationally incompetent if he lacks this quality in the proper degree. Professional routining is the paramount feature in the education of a musician. When he has this quality he not only has the necessary knowledge and skills, but consistently exhibits them.

The music skills listed above are developed either singly or in combination with applied music, orchestra and music theory. Items (8) through (11) are as a rule the responsibility of the music theory courses, but as noted previously, their necessity is being questioned by musicians and music theorists. A few research studies cited in Chapter III have indicated that these skills are possibly developed through music contacts other than the theory classes. At this time it is too early to rule out the development of these skills in music theory courses. Nevertheless, the four skills are included in course descriptions both in the individual selected schools and in the derived common course of study.

Summary

When relating the competencies needed by an orchestral musician to the offerings of the selected schools of music represented by the common course of

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[5] Ibid.

study, the following results appear: (1) All knowledge of a non-music nature thought by various sources to be needed is included in the course of study. (2) Knowledge of a musical nature needed for competency is included in the courses of the various schools as well as in the composite common course of study, with the exception of the areas of "popular" music, acoustics and pedagogy. (3) All the listed skills of both a non-music and a music nature are included in the common course of study as well as in the courses of the individual schools.

Therefore, with the exception of the few items of music knowledge which are not included in the course of study, all of the knowledge and skills of both a non-music and a musical nature needed for professional competency are included in the courses of study of the various schools. This is based on the written and implied course descriptions. The derived common course of study is therefore assumed to meet the needs of the student musician who is studying for an orchestral career.

CHAPTER VI

EXAMINATION OF SELECTED FACTORS RELATED TO THE COURSE OF STUDY

The factors which were thought to impinge on the productive atmosphere were determined by an examination of the literature. The literature in this area was limited and only three works touch on the subject as a whole: W. McNeil Lowry, The University and the Creative Arts; James A. Perkins, Should the Artist Come to the Campus?; and The Rockefeller Panel Report, The Performing Arts: Problems and Prospects.[1]

The factors were selected for this study on the following basis: (1) the factors were mentioned in all three of the sources, and (2) the information on the factors could be gathered from the catalogues and the literature or by contacting personally the schools involved. Therefore, the factors selected were: (1) Admissions, (2) Scheduling and (3) Staff Hiring Practices.

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[1]Lowry, op. cit., Perkins, op. cit., and Rockefeller, op. cit.

(1) Admissions

Entrance Requirement - Audition on Major Instrument

One of the prime criticisms Lowry had of universities that purport to educate creative artists is that they usually do not have the administrative machinery to prevent the admission of the untalented. All ten of the selected schools, as shown in Table 17, require entrance auditions whereby students can be accepted or rejected by the music staff. Therefore, all of the large universities in this study are exempt from his criticism.

The level of competence that the student has on his major instrument, although important, does not by some rigid means of control determine whether he qualifies for admission to any of the selected schools. The Juilliard registrar states,

> although one can investigate the number of years the applicant has studied, and can gain some insight into the seriousness of that study from the repertoire he has mastered or thinks he has, it simply is not possible to make any judgment concerning the QUALITY of his preparation.[2]

So, although "admission to the School is based mainly on the results of a competitive performance examination,"[3]

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[2]Judson Ehrbar, "Faculty Evaluations Largest Factor Governing Admission to Juilliard," The National Student Musician, II, No. 6 (February, 1965), p. 1.

[3]Bulletin of Juilliard School of Music, 1965-66, p. 19.

TABLE 17

ADMISSIONS REQUIREMENTS OF THE TEN SELECTED SCHOOLS

School	Audition Major Inst.	Audition Piano	Music Theory Test	Music Literature Test	Approved High School Diploma	Total High School Units	Total High School Solids	High School Class Standing	NSE[a]
Juilliard	Yes	No	No	No	Yes[f]	0	0	-	-
New England	Yes	No[b]	No	No	Yes[f]	0	0	-	ACT[f] or SAT
Curtis	Yes	No[c]	No	No	No	0	0	-	-
Peabody	Yes	No[b]	No[d]	No	Yes[f]	16	8	-	-
Eastman	Yes	No[c]	No[d]	No	Yes[f]	16	4	upper half[f]	-
Oberlin	Yes	No	No	No	Yes[f]	15	7	-	-
Indiana	Yes	No	No	No	Yes[f]	13	13[g]	upper half[f,h]	-
Illinois	Yes	No	No	No	Yes[f]	0	7	-[h]	-
Northwestern	Yes	No	No	No	Yes[f]	15	12	-	SAT[f]
Michigan	Yes	No	Yes[e]	No	Yes[f]	15	0	-	-

[a]Nationally Standardized Examination.

[b]Imply that previous piano is necessary.

TABLE 17

Footnotes -- Continued

[c]Imply that previous piano is desirable.

[d]Imply that previous music theory training is desirable.

[e]Aural test only.

[f]Exceptions granted.

[g]Numerous exceptions granted.

[h]Out-of-state students to be in upper ¼ of graduating class.

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the standards are set arbitrarily by the auditioning faculty.[4]

The bulletin of the New England Conservatory states, "in the audition, emphasis is placed more on general musicianship than on level of performance."[5] Curtis likewise is less than objective: "the final decision as to the suitability of an applicant for acceptance rests upon the evidence of talent shown rather than upon the degree of advancement already attained."[6] The remaining schools follow a similar pattern. All of the schools

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[4]Ehrbar, op. cit., p. 12.

[5]Bulletin of The New England Conservatory, 1965-66, p. 19.

[6]Bulletin of The Curtis Institute of Music, 1965-66, p. 14.

enumerate the expected audition material in either specific or general terms, but their position on objective standards appears to be similar.

Entrance Requirement - Audition on Piano (Secondary)

As Table 17 indicates, only New England and Peabody imply that previous piano study is necessary. Curtis and Eastman note that it is desirable. All of the other of the selected schools make no mention of secondary piano requirements for admission. For the most part, a background in piano on entrance is not compulsory for the orchestral musician.

Entrance Examination - Music Theory

As Column 3 in Table 17 indicates, knowledge of written or aural music theory is not an admission requirement, except at Michigan, where an aural theory test is an admissions requirement. The pattern of the selected schools remains the same, as indicated by Table 17, in that they attempt to determine musical talent on the basis of performance on the major instrument of the student, rather than by other criteria.

Entrance Examination - Music Literature

None of the ten selected schools attempts to set admissions standards by using tests of music literature, as is indicated in Column 4 of Table 17. Juilliard states

that "the variation in background among students. . .is enormous and involves. . .all shadings of general culture from relatively high sophistication to the lowest passable standard set by our secondary schools."[7] They admit that many of their freshmen arrive "without any comprehension of many basic musical materials."[8] Therefore, it can be stated that none of the schools attempt to admit or reject students on the basis of their knowledge of music literature.

Summary - Music Requirements for Admission

In summary, it can be concluded that the selected schools do not eliminate musically talented students on the basis of their ability to perform on a secondary instrument, or, with one exception, on evidence obtained on written examinations of musical ability or musical knowledge. That exception is Michigan, which gives an aural music theory test.

Therefore, the conclusions to be drawn from Column 1 of Table 17 would be that although entrance auditions are required, there is an attempt by the auditioners to estimate musical talent by subjective means rather than by a totally objective analysis of the performance quality

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[7] The Juilliard Report of Teaching the Literature and Materials of Music (New York: W. W. Norton and Company, Inc., 1953), p. 43.

[8] Ibid.

of the prospect, and that the selected schools do audition the student in performance on his major instrument and attempt to grant or deny admission on the basis of musical talent.

These conclusions indicate that the selected schools are able to control, on musical grounds, the admission of students. Therefore, these schools do not enroll students who display only minimal musical talent.

Entrance Requirements - Non-Music

Perkins implies that the administrative pattern of the university inhibits the productivity of the fine arts school. He states "that maybe the university has too quickly applied general rules to all its students and faculty without proper consideration to that precious fraction whose creative genius requires very special handling."[9] Therefore, the academic demands of the admissions office may act to keep people with musical talent out of the music school.

High School Diploma Requirement

Only Curtis provides its own staff for the tutoring of pre-college students, and is the only school that has the power to grant a high school diploma. The other nine schools imply or state that graduation from

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[9]Perkins, op. cit., p. 71.

high school is required, but all of them have administrative machinery for admitting applicants who have not graduated from an approved secondary school. Therefore, none of the ten selected schools denies admission to the potential musician on the basis of his not having a diploma from an approved high school.

High School Requirements

Juilliard, New England, Illinois and Curtis make no recommendations concerning the total high school units recommended. The other six schools suggest that the student should have a total of from 13 to 16 high school units.

The distribution among the required subjects may be more important than the total number of high school units. Eastman prefers four units in English and makes no further recommendations. Illinois prefers three units in English, two in language and two in history. Oberlin recommends three units in English, one in history, two in mathematics and one in science. Peabody suggests three units in English and five distributed over the solids, with two in language (foreign). Northwestern recommends a total of 12 solids, but lists specifically only three in English as a requirement, and grants exceptions to the requirements, particularly in the case of music students. Of the ten selected schools, Indiana has the highest requirements,

a total of 13, with four required in English and the other nine distributed among solids; but numerous exceptions are granted both for music students and students entering other schools of the university.

The NASM recommendations state that "high school graduation is assumed to imply a minimum of fifteen units of high school work." The regulations further state that

> it is recommended that three units be in English, two in foreign languages, one in mathematics, one in science or history and eight in elective subjects; that five of the eight electives be in these same fields or in other subjects of general educational value [music is not included].[10]

In summary, it can be stated that only two of the selected schools, Indiana and Northwestern, surpass or match the NASM recommendations for total high school units required. In addition, it should be noted that exceptions to these recommendations in these two schools are granted in the cases of musically talented students.

Achievement Test Scores and High School Class Standing Requirements

As is indicated on Table 17, only New England and Northwestern require the student to take nationally standardized academic achievement examinations. Exceptions in both cases are allowed.

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[10]National Association of Schools of Music, By-Laws. . ., p. 18.

Only two schools, Eastman and Indiana respectively, recommend or require that the student rank in the upper half of his high school graduating class. As noted in Footnote h, Table 17, Indiana and Illinois require that the out-of-state students rank in the upper quartile of their class. ALL of the schools, on the other hand, have either formal or informal procedures for the admission of talented students who do not meet the defined admissions standards.

Letters of inquiry regarding admissions practices were sent to the selected music schools. All of the schools indicated that the rules regarding the academic and achievement records of the applicants were not rigidly adhered to. The officers of the replying music schools noted that rules were relaxed at times, and that working agreements regarding the admission of marginal or questionable applicants were in operation between their music schools and the central office of admissions. From a personal interview with Fred Hemke, Assistant Dean, School of Music, Northwestern University, who is in charge of undergraduate admissions to his school, it was learned that the admissions policies had been enforced rigidly for a few years, but at the request of the music school the rules have been relaxed. Mr. Hemke noted that during the period of rigid enforcement the musical quality of the incoming students suffered noticeably.

The present standards of admission to some schools of music of large state universities which are not among the ten selected in this study determine the suitability of the applicants by methods quite opposite to those cited above. The applicant may be required to graduate from an approved high school, take the ACT test, and take several music admissions tests; (1) a music theory test - aural, (2) a music theory test - written, (3) a music history and general music knowledge test, and (4) an applied music test. According to Poland, the least reliable of these is the applied music test, and his regression equation predicting academic success would not be altered significantly if the applied music score were not included.[11] Receiving a passing score on the tests does not predict that the applicant will be able to become a competent musician. It only predicts that the student should be able to complete successfully university level work as demanded by that university school of music.[12]

A study completed recently at Indiana University concluded that under newly-adopted admissions standards, 80 per cent of the Class of 1957 would not have been

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[11]Interview with William Poland, The Ohio State University, Columbus, Ohio, May 11, 1964.

[12]William Poland, "Measuring Behavior and Predicting Success in the University School of Music," a paper prepared for the AERA Annual Meeting, Chicago, Illinois, February 14, 1963 (ditto copy).

admitted.[13] One of the concluding recommendations of the study notes that the admissions requirements should be re-examined if the quality of the music school applicants is affected.[14] As stated previously, the requirements have been relaxed in order to accommodate the admission of students with marginal or questionable academic backgrounds.

Summary - Non-Music Requirements for Admissions

It can be concluded that although the selected schools had one or more non-music admissions requirements, in all cases there were methods, formal or informal, for having students with musical talent admitted to the school even though they may lack some or all of the requirements.

(2) Scheduling

According to the sources cited at the beginning of this chapter, the schedule of a music school operating within the framework of a university is not conducive to the development of creative talent. Lowry notes that the schedule must allow extended periods of time for the

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[13]Harry Rommel Huxol, "Effects of the Revised Admissions Policy for Freshmen on Entering Music Majors of the Class of 1958 at Indiana University" (unpublished Ed.D. dissertation, Indiana University, 1961), p. 80.

[14]Ibid.

student to concentrate on his musical tasks.[15] Perkins not only recommends a flexibility in scheduling which will allow for periods of concentration for students and faculty alike, but attacks the university administrative policy and states "that maybe the university has too quickly applied general rules to all its students and faculty without proper consideration to the precious fraction whose creative genius requires very special handling."[16] The Rockefeller Panel Report does not pursue the flexibility and scheduling of the course of study as much as the other sources, but does list them and state that "appropriate adjustments in its institutional arrangements must be made if the university hopes to be successful as an educator of professional musicians."[17] The report appears to imply that the university as a general rule does not at the moment make such arrangements.

The scheduling of the selected schools was examined in two ways. Class schedules were obtained from the schools and the freshman applied music major schedules were plotted. The freshman schedule was selected because its course of study contains the most non-music courses and has the most rigid requirements. In addition to this

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[15]Lowry, op. cit., p. 109.

[16]Perkins, op. cit., p. 71.

[17]Rockefeller, op. cit., p. 176.

examination, letters were written to the schools asking them what difficulties they were having with scheduling because of enrollment pressures, room utilization formulas or space shortages.

The examination of the class schedules revealed that the selected schools were having no difficulty making their schedule of required courses fit those general education courses which were required by the university. Michigan has academic classes offered in the music building for music students only, and thus eliminates both problems of travel and scheduling for all basic non-music subjects. The other large universities and Oberlin do not have scheduling difficulties, even though there are no special sections available for all of the required non-music work. Nor do conflicts occur when the schedule is distorted on the assumption that all of the "popular time" courses were closed before the music student attempted to register.

The absence of laboratory sciences in the applied music course of study aids the scheduling. The schedules of the selected schools have two-and-three-hour sections of free time during the day, and none of the universities are at present using night times for basic non-music courses. Therefore, all of the schools have every evening free for the students either to attend concerts or practice.

The answers to the inquiries revealed that non-music course scheduling was not a problem at any of the universities. Northwestern did have one conflict between one choir rehearsal and non-music courses. The other schools had some difficulty solving conflicts within their own schools, and this problem involved the scheduling of student personnel in the various performing groups. The only school that has an ROTC laboratory required of all male students is Indiana. This laboratory is not placed in the schedule at several different times, but is limited to one time section. Thus, the entire university schedule of lower-division courses and many upper-division courses is kept free from conflict with this course.

Summary - Scheduling

It can be stated that although the sources considered university scheduling to be a problem that would inhibit or frustrate creative arts education, the universities and colleges in this study have not experienced this difficulty as yet. The sources implied that a music school is confined within certain scheduling procedures and that required non-music courses which are not under the control of the music school are scheduled in a manner which not only complicates scheduling in the music school, but makes flexibility of scheduling impossible or possibly adds an element of distraction to the "Spartan effect" of the music school atmosphere.

(3) Staff Hiring Practices

All three of the sources mentioned that the staff for the music school must be hired on the basis of criteria other than those used by the remainder of the university. Lowry recommends that the hiring of staff be based on artistic merit.[18] This staff is in part to be responsible for teaching, but it is to provide performances of professional quality for the student body. The music students are not only to learn from the performance of these artists, but are to learn by observing how performers work in preparation for such performance. Lowry believes that these qualities are not available from just any competent performer, but are available only from performers of recognized stature.[19]

Perkins places staff hiring practices as his principal concern. He states that "the hiring of artists [is to be done] strictly on the basis of their grounding in their disciplines."[20] Even though the artist may not be in sympathy with, nor even be aware of, the goals of the university as a whole, his presence is nevertheless good for the fine arts school and the entire university.

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[18] Lowry, op. cit., p. 109.

[19] Ibid.

[20] Perkins, op. cit., p. 54.

The Rockefeller Panel Report makes a recommendation regarding hiring practices which duplicates the other sources, emphasizing that the hiring of performing artists who are good teachers regardless of their academic qualifications is essential.[21] The other sources were not as explicit regarding the teaching ability of the performers.

Data

The staffs of the selected schools as they appeared in the catalogues were examined and the percentages of those holding various degrees were calculated. This information was not available in the catalogue from Illinois and was obtained by personal interview.[22] For comparison, the percentages were placed in Table 18.

The analysis included all of the staff including those holding the rank of instructor. The indication of how many of the doctorates were honorary was not available from the sources. There was also no attempt to separate those of the staff who were responsible for applied music from those who were responsible for music courses of a non-performing nature.

As Table 18 indicates, seven of the schools have staffs of which only five to 20 per cent of the members

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[21]Rockefeller, op. cit., p. 112.

[22]By personal interview with Mr. Duane A. Branigan, Director of the School of Music, The University of Illinois, Champaign, Illinois, March, 1966.

have a doctor's degree. Only Indiana, Illinois and Michigan exceed this percentage, and they exceed it by only a slight amount.

TABLE 18

ACADEMIC DEGREES OF THE STAFFS OF THE TEN SELECTED SCHOOLS (APPROXIMATE PERCENTAGES)

Schools	Per Cent Doctorates	Per Cent Master's Degrees	Total Per Cent Doctor's and Master's Degrees	Per Cent Bachelor's Degrees	Per Cent Having No Academic Degree	Total Per Cent Having Less Than Master's Degree
Juilliard	9	18	27	13	60	73
New England	6	23	29	16	55	71
Curtis	7	13	20	30	50	80
Peabody	10	27	37	17	46	63
Eastman	16	46	62	25	13	38
Oberlin	9	57	66	15	19	34
Indiana	21	27	48	14	38	52
Illinois	24	47	71	16	13	29
Northwestern	18	46	64	20	16	36
Michigan	31	44	75	10	15	25

Considering the data from a different point of view, it can be seen that from 10 to 20 per cent of the individual staffs have only a bachelor's degree and that from 12 to 60 per cent of the staffs have not earned a bachelor's degree. Thus, from 23.5 per cent to 80 per cent of the

faculty of the schools have less than a master's degree and would not qualify for employment in many other schools of higher education.

The table seems to illustrate graphically that the selected schools do at least some staff hiring without regard to academic degree. Since all of the schools except Curtis and Oberlin have graduate programs through the doctorate, it can be assumed that the percentages in the remaining eight schools would be higher if the staff responsible for graduate study only were subtracted from the calculations.

Summary - Staff Hiring Practices

It can be stated that although the sources considered university hiring practices to be a problem that could harm the instruction program in the creative arts, the universities and colleges in this study have not experienced this difficulty as yet. The sources implied that music schools which were a part of a university would have difficulty hiring staff solely on the basis of their artistic merit. In this study no problem appeared to exist.

Summary

The factors which were thought to impinge on the productive atmosphere were determined by an examination of the literature. The factors were selected on the basis

that (1) they were mentioned in all three of the sources, and (2) the information on the factors could be gathered from the catalogues and the literature or by contacting personally the selected schools. The factors selected were: (1) Admissions, (2) Scheduling and (3) Staff Hiring Practices.

The sources implied that the admissions policies of universities were not suitable for selecting students for the music schools. They implied that students are admitted on the basis of academic achievements and are not screened according to artistic ability. The result is the admission of students who are not talented artistically. The data indicated that in the selected schools this assumption was not true. Students in the selected schools were admitted on the basis of their performance on their major instrument and not eliminated on the basis of academic standards.

The sources implied that the scheduling practices of the universities were not suitable for the education of musicians. They implied that flexibility of scheduling and the presence of large periods of free time was not available at the university and that this lack would frustrate the artistic concentration of the students. The data indicated that in the selected schools this assumption was not true. All of the selected schools had two-or-three-hour periods of free time during the daytime portion

of the schedule. None of the schools had any non-music courses conflicting with their schedule during the evening hours. None of the schools reported any conflicts with non-music courses.

The sources implied that the hiring practices of universities would make it difficult for the schools of music to hire staff on the basis of artistic merit rather than academic degree. They implied that the criteria of academic degree or publication record would eliminate many artist teachers from employment consideration. The data indicated that this assumption was not true. All of the selected schools had staffs in which many of the members did not have doctorate degrees. From 23.5 to 80 per cent of the members of the individual staffs did not have a master's degree. It appears that the hiring practices of the university at large do not apply to the music schools of the selected schools.

Conclusions

The selected schools did not function under the standard admissions practices of the university at large. All of the music schools required the candidates to demonstrate their talent in an audition on their major instrument. Those talented candidates who did not meet the academic requirements of the university could be admitted by special agreement with the admissions office.

The selected schools had scheduling policies which allowed large periods of free time in the schedule of the music student. There were no conflicts with the non-music schedule of required courses and no non-music classes were scheduled during the evening hours.

None of the selected schools appeared to have difficulty acquiring a qualified staff for the music school. According to the data, the staff was hired on the basis of artistic merit and not on the basis of academic degree or publication record.

It can therefore be concluded that although admissions, scheduling and staff hiring policies may be a problem in the music schools of other universities, the selected schools in this study did not have difficulties in these areas. Since these schools were selected on the basis of their production of orchestral musicians, it may be concluded that the absence of problems related to these three factors may be conducive to the maintenance of a productive atmosphere in these schools. Since it was not part of the study to examine less productive schools, it is not known whether non-productive schools exist which also have no problems with any or all of the factors. If it is found that non-productive music schools exist which have a similar course of study and do not have problems with admission, scheduling and staff hiring practices, it would then have to be concluded that a productive atmosphere is dependent on more than these four factors.

CHAPTER VII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The responsibility for training professional orchestral musicians is becoming more and more a function of the university. The assuming of this responsibility by the university presents problems not only for the university but for everyone interested in the growth of the performing arts.

The conservatories continue to produce the majority of the professional musicians. Some authors suggest that the university appears to have elements in its administrative pattern which tend to suppress the development of competence by the musicians.

These sources suggest that if the university is to be responsible for the education of performing musicians it will be necessary for the university to undergo changes in administrative practice so that the music schools of the university may be productive. They suggest that admissions practices, course of study, scheduling and staff hiring practices must be altered from the traditional

university pattern to a pattern which does not disturb the development of competence of the musicians.

It appeared from the analysis of the related literature that of all the problems of transplanting the productive atmosphere from the conservatory to the music school of the university, there were four which were most fundamental: (1) admissions, (2) course of study, (3) scheduling, and (4) staff. The problem of the study was to determine whether institutions which produce competent orchestral musicians have developed common elements in their course of study and sustain administrative factors which impinge on the effectiveness of either the course of study or the productive atmosphere. The solution of the problem required:

(1) A determination of the competencies needed by an orchestral musician.

(2) An analysis of the courses of study which produce these competencies.

(3) An analysis of selected factors which impinge on the productive atmosphere.

Procedure

Ten music schools which have established reputations for the production of competent orchestral musicians were selected. They were selected on the basis of interviews with seven professional musicians and formerly

professional orchestral musicians who were in a position to know which schools were most productive. The selection of the schools was made on the basis of a frequency count of the number of times the school was mentioned.

The courses of study as they appeared in the catalogues of the ten selected schools were then analyzed and the common elements were drawn from them.

The factors which were thought to impinge on the productive atmosphere of a music school were determined. These were selected by an examination of the literature.

The competencies needed by an orchestral musician were gleaned from the literature. A comprehensive compilation was undertaken in 1955 by Everett Timm in his Training Requirements of Musical Careers.[1] The remainder of the search of the literature was confined to the intervening 10 years, since it is possible that the list of competencies may have changed in the past decade.

The competencies which were thought to be needed by a professional orchestral musician were then related to the common course of study derived from the analysis of the ten productive schools of music. This was done to determine how closely the needs of the student musician were being met by the subject matter offered in the common course of study.

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[1]Timm, op. cit.

Finally the factors which had been determined previously were related to the course of study.

Delimitation

The study was limited to the three areas of the problem: (1) The determination of the competencies needed by an orchestral musician, (2) the analysis of the courses of study which produce these competencies, and (3) the analysis of selected factors which impinge on the productive atmosphere. No attempt was made to determine, develop or analyze any of the other areas of responsibility of the music school.

The study of the impingement of factors on the training of the orchestral musicians was limited to those three factors which appeared to be most prominent: (1) Admissions, (2) Scheduling of Classes, and (3) Hiring of Staff. These factors were not examined in the light of possible combinations of effects, and other possible factors were not considered.

Results

The selection of the schools was made on the basis of a frequency count of the number of times the school was mentioned in the interviews with seven professional and former professional musicians. Those ten schools most often mentioned were selected as the ten most productive schools. The order of the list was not a consideration.

The results were as follows: Four conservatories (The Curtis Institute of Music, Philadelphia, Pennsylvania; Juilliard School of Music, New York, New York; The Peabody Conservatory of Music, Baltimore, Maryland; and The New England Conservatory, Boston, Massachusetts), two conservatories which are attached to a college or university (The Eastman School of Music of The University of Rochester, Rochester, New York; and The Oberlin Conservatory of Music of Oberlin College, Oberlin, Ohio) and four schools of music which are attached directly to large universities (The School of Music of The University of Indiana, Bloomington, Indiana; The School of Music of The University of Illinois, Champaign, Illinois; The School of Music of Northwestern University, Evanston, Illinois; and The School of Music of The University of Michigan, Ann Arbor, Michigan).

The competencies needed by an orchestral musician can be enhanced by collegiate instruction in courses of a general cultural value or, more specifically, courses in languages, literature, history, painting and philosophy. However, this knowledge can in no way make up for deficiencies in more vocational areas. Knowledge in musical areas is considered most important. These areas of musical knowledge are: (1) standard symphonic orchestra repertoire, (2) musical terminology, (3) popular music styles, (4) acoustics of musical instruments, (5) music history

and historical styles of performance, (6) musical forms, and (7) pedagogy of the major applied instrument.

The non-music skills needed by an orchestral musician are those skills thought to be developed by a high school education. The musical skills needed are: (1) Command of basic skills and techniques of the instrument, (2) Ability to play in tune with others, (3) Control of tone quality, (4) Control of vibrato, (5) Ability to phrase and play musically, (6) Ability to sight read, (7) Ability to transpose, (8) Ability to hear harmonic progressions and to take melodic and harmonic dictation, (9) Ability to write harmony, (10) Ability to sight sing, (11) Ability to write counterpoint, demonstrate analytical technique, orchestrate and compose.

These individual skills and knowledge cannot stand alone nor can they be combined only in part in the vocationally competent musician. Being professionally routined is the quality of a musician to be musically reliable. This ability relates all of the knowledge and skills into competencies, and the musician is vocationally incompetent if he lacks this quality in the proper degree. Professional routining is the paramount feature in the education of a musician. When he has this quality he not only has the necessary knowledge and skills, but consistently exhibits them.

The analysis of the courses of study of the selected schools resulted in the formation of a common course of study which was determined by using the guidelines referred to in Chapter IV. This composite common course of study includes the equivalent of eight semesters of applied music on the major instrument of the orchestral musician with at least four and not more than five credit hours awarded per semester. The instrumentalists are required to study piano as a secondary instrument for a minimum of two and a maximum of four semesters. One to two credit hours will be awarded per semester. Music theory is a requirement for at least 22 credit hours and not more than 30 credit hours. Music history is required for at least 10 credit hours and not more than 12 credit hours.

By using the guidelines in the analysis of the music electives, it can be stated that music electives are not necessary in the education of orchestral musicians. The total number of credit hours in non-performance music subjects for the common course of study is set at not less than 35 hours and not more than 54 hours.

Ensemble training is in the course of study for instrumentalists in all of the schools, but it is not possible to set minimum or maximum limits measured in credit hours on the amount of training. Solo performance recitals are not a part of the common course of study for an orchestral musician.

All of the schools have courses of study which require at least half of the credit hours to be taken in subjects which are either non-music, non-performing music, or performance beyond the acquisition of basic skills. The non-music subjects in the common course of study will consume at least 26 credit hours and not more than 30 credit hours. Except for a few basic courses, no specific non-music subjects are required.

By using the guidelines, the analysis of the non-music subjects by areas showed that at least six credit hours are to be taken in the humanities and that no credit hours are required in the areas of the social and natural sciences. Non-music, non-academic subjects, such as physical education and ROTC, are not required in the common course of study determined by the guidelines.

When the competencies needed by an orchestral musician were related to the offerings of the selected schools represented by the common course of study, the following results appeared: (1) all knowledge of a non-music nature thought to be needed is included in the course of study; (2) knowledge of a musical nature needed for competency is included in the courses of the various schools as well as in the composite common courses of study with the exception of "popular" music, acoustics, and pedagogy; (3) all the listed skills of both a non-music and a music nature are included in the common course of study as well as in the courses of the individual schools.

Therefore, with the exception of the few items of music knowledge which are not included in the course of study, all of the knowledge and skills of both a non-music and a music nature needed for professional competency are included in the courses of study of the various schools. This is based on the written and implied course descriptions. The composite common course of study is therefore assumed to meet the needs of the student musician studying for an orchestral career.

The factors which were thought to interfere with a productive atmosphere were determined by an examination of the literature. The factors selected were: (1) Admissions, (2) Scheduling and (3) Staff Hiring Practices.

The sources implied that the admissions policies of universities were not suitable for selecting students for the music school. They implied that students are admitted on the basis of academic achievements and are not screened according to artistic ability. The result is the admission of students who are not talented artistically. The data indicated that in the ten selected schools of this study this assumption was not true. Students in the selected schools were admitted on the basis of their performance on their major instrument and not eliminated on the basis of academic standards.

The sources implied that the scheduling practices of universities were not suitable for the education of

musicians. They implied that flexibility of scheduling and the presence of large periods of free time were not available at the university and that this lack would frustrate the artistic concentration of the students. The data indicated that in the selected schools this assumption was not true. All of the selected schools had periods of two or three hours of time during the day-time portion of the schedule and none of the schools had any non-music courses conflicting with their schedule during the evening hours. None of the schools reported any conflicts with non-music courses.

The sources implied that the hiring practices of universities make it difficult for the school of music to hire its staff on the basis of artistic talent rather than academic degree. They implied that the necessity of an academic degree or publication record eliminates many artist teachers from employment consideration. The data indicated that in the selected schools of this study this assumption was not true. All of the selected schools had staffs in which many of the members did not have doctorate degrees. From 23.5 to 80 per cent of the members of the individual staffs did not have a master's degree. It appears that the hiring practices of the university at large do not apply to the music schools of the selected schools.

Conclusions

1. The competencies needed by a professional orchestral musician are agreed upon by the authorities in the field.

2. These competencies are for the most part thought to be developed by the courses of study in the conservatories and the schools of music of the selected universities.

3. The courses of study of the conservatories and the schools of music of the selected universities are similar.

4. The courses of study of the music schools of the selected universities did not contain more non-music courses than did the conservatories.

5. The admissions requirements of the music schools of the selected universities are similar to those of the conservatories even though the requirements for admission to other schools of the university may be quite different. All of the schools selected their students principally on the basis of performance on their major instrument. Music students were not necessarily denied admission on the basis of graduation from an approved high school, scores received on a nationally standardized test, high school class standing, or other non-music criteria.

6. None of the selected university schools of music experienced difficulty with the schedule of the university at large. The schedule of the students in both the university school of music and the conservatory was similar. Each had large blocks of uninterrupted time and neither institution had non-music courses scheduled in the late afternoon or evening hours.

7. None of the selected university schools of music had any difficulty hiring staff members who lacked particular academic credentials. Although a larger percentage of the staffs of the music schools of the universities had a master's degree or higher, there were still a large number of instructors of the staffs of both university music schools and conservatories who had less than a master's degree or no academic degree at all.

Recommendations for Further Research

1. Research is needed to develop a scale which will indicate the degree of productivity of a music school. Even the gross measurements of this dissertation indicate that there are degrees of productiveness among productive schools.

2. Research is needed to determine whether there are non-productive music schools which have courses of study, admissions policies, scheduling or staff hiring policies which are the same as those found in both the

conservatories and the selected university schools of music in this study. If such schools exist it would then be necessary to explore the possibilities of there being more factors than the four examined in this study.

3. Research is needed to determine whether there are other factors in the productive atmosphere of a conservatory which must be transplanted to the university school of music to insure productivity.

4. Research is needed to develop scales which measure the degree to which various factors are or are not present in a conservatory or university music school atmosphere, so that these factors can be measured more definitively.

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APPENDIX A

APPENDIX A

SELECTED PORTIONS OF THE BY-LAWS AND REGULATIONS, 1959, OF THE NATIONAL ASSOCIATION OF SCHOOLS OF MUSIC[1]

. . .

II. GENERAL REQUIREMENTS FOR GRADUATION FROM CURRICULA LEADING TO BACCALAUREATE DEGREES IN MUSIC.

. . .

B. Semester Hours

1. In class subjects such as harmony, history of music, etc., and academic subjects, one semester hour of credit shall be given for one period of recitation (50 minutes) plus two hours of preparation each week of semester, inclusive of examinations. In subjects such as ear training, sight singing, dictation, ensemble, etc., where little outside preparation is required, two 50-minute recitation periods per week shall be required for one semester hour of credit.

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[1]National Association of Schools of Music, By-Laws. . ., op. cit., pp. 19-37.

2. It is recommended that one semester hour credit shall be given for each three hours per week of practice, plus the necessary individual instruction, with a maximum of six credits per semester allowed for the major subject in applied music. It is understood that the credit is not earned unless the final examination is satisfactorily passed. Students shall be required to take a minimum of one hour (60 minutes) individual instruction per week in the major subjects in applied music throughout each year of residence.

3. For a student to earn one semester hour of credit during a summer session, he must attend approximately the same number of class sessions [sic] and make the same amount of preparation as he would by attending a one hour per week course for one semester during the regular academic year. It is usual academic practice to allow a student to earn one semester hour of credit for each week of the summer session.

III. SPECIFIC REQUIREMENTS FOR UNDERGRADUATE DEGREES.

NOTE--In all the following course outlines, the work of the first two years or lower division is a standard foundation for all students; it is intended that the work of the upper division be

specialized to suit the individual needs of each student.

A. Bachelor of Music Degree with an Instrumental Major

The course shall include the following studies:

1. APPLIED MUSIC. The study of applied music shall be carried on during each year of residence. See succeeding pages for comparative levels of advancement for admission and graduation.

2. MUSIC HISTORY AND THEORY COURSES

a. Lower Division

A composite course in musical theory to include the equivalent of two years of sight singing and dictation, one year each of elementary and advanced harmony, keyboard harmony and an approach to elementary counterpoint (16 to 20 semester hours).

Survey of music literature and history. Recommendations in these areas have appeared in Bulletin No. 45.

NOTE--Private work in harmony may be credited in accordance with work done equivalent to the stated class courses, provided the pupil passes the same examinations as the class.

b. Upper Division

A minimum of 12 semester hours must be selected from the upper division.

Form and Annalysis [sic] (minimum of 4 semester hours).

Counterpoint.

Composition in the smaller forms up to and including The [sic] three-part song forms.

Orchestration.

Conducting.

History of Music.

Literature of the major instrument.

3. ACADEMIC COURSES. A minimum of eighteen and a maximum of thirty-six semester hours in subjects of a general cultural value is required. Such academic courses must in all respects conform in quality of instruction and in recitation and examination requirements to the established standards of accredited institutions of collegiate rank.

. . .

IV. MINIMUM LEVELS IN APPLIED MUSIC FOR BACCALAUREATE DEGREES IN MUSIC

. . .

D. Violin Requirements

1. ENTRANCE REQUIREMENTS. To enter the four year degree course in violin the student should have an elementary knowledge of the pianoforte.

He should have the ability to perform etudes of the difficulty of the Kreutzer Etudes, Nos. 1 to 32, and works of the difficulty of the Viotti Concerto, No. 23, the de Beriot concerti, Nos. 7 and 9, the Tartini G minor sonata and the easier Handel sonatas.

2. END OF THE SECOND YEAR. At the end of the second year the student should have acquired the ability to perform works of the difficulty of the Viotti Concerto No. 22, the Spohr Concerto No. 2 and the easier Bach sonatas for violin and piano.

The student should also give evidence of his ability to read at sight compositions of moderate difficulty, and should demonstrate sufficient ability in ensemble to take part in the performance of easier string quartets and symphonic works. He should have acquired sufficient pianistic ability to play simple accompaniments.

3. END OF FOURTH YEAR. The candidate for graduation should show an adequate technical grounding in scales, arpeggios, bowing and phrasing and the ability to perform works of the difficulty of the Mendelssohn E minor concerto, the Bruch G minor or Epohr [sic] No. 8.

During the four year course the student should have had not less than two years practical orchestral experience and two years of ensemble. He should have studied the viola sufficiently to enable him to play viola ensembles.

He should further demonstrate adequate ability to sight reading and should be able to sight-read simple piano accompaniments.

E. Violincello Requirements

1. ENTRANCE REQUIREMENTS. To enter the four year degree course in 'cello, the student should be able to play all major and minor scales in three actives [sic] and an etude by Puport [sic] or Merk. He should also be able to play one slow and one fast movement of a classical sonata, such as the one by Corelli in D Minor and a fast movement of the same difficulty as the first movement of the Concerto in B Minor by Goltermann.

2. END OF SECOND YEAR. At the end of the second year, the student should have acquired adequate technique to play all major and minor scales and arpeggios in four octaves at a rapid tempo as well as scales in octaves, thirds and sixths in two octaves.

The student should have studied compositions of the same difficulty as the St. Saens

Concerto, easier movements from the Bach Suites for Cello alone and the Sonata in G Major by Sammartini.

Knowledge of the ensemble literature including the easier trios and quartets by Beethoven, Brahms, Haydn, and Mozart should be attained by the end of the second year. The student must have acquired the ability to read ensemble and orchestra parts of moderate difficulty at sight.

3. END OF FOURTH YEAR. The candidate for graduation must be able to play all major and minor scales and arpeggios in four octaves at a rapid tempo with various bowings. He must be able to play at a moderate tempo, scales in octaves, thirds and sixths in three octaves.

The student should have in his repertory, two of the Beethoven, one of the Brahms sonatas for 'cello and piano, an American composition in large form, a concerto of the difficulty as the Lalo concerto and a number of pieces such as: "At the Fountain" by Davidoff and the "Spinning Song" by Popper.

The candidate's playing knowledge of the ensemble literature will include the classics and the moderns. He must not only be able to play

a program very well by memory, but he must also be able to demonstrate that he has enough ensemble and orchestral experience to put him in the professional class.

F. Clarinet Requirements

1. ENTRANCE REQUIREMENTS. To enter the four year degree course in clarinet the student should have an elementary knowledge of the pianoforte.

He should have acquired the fundamentals of good tone production, breath control and hand position; an elementary knowledge of major and minor scales and arpeggios; and the ability to perform material such as is contained in the Langenus Clarinet Method, Part I. He should have studied one or more solo numbers of good musical quality not too difficult for him to play well.

2. END OF THE SECOND YEAR. At the end of the second year of the course the student should have acquired a thorough knowledge of all the major and minor scales and arpeggios; have studied the etudes of Rose and the earlier books of Jean-Jean; have acquired the ability to perform works of the difficulty of the Spohr Concerto No. 1, and Weber Concerto No. 1 and Grand Duo Concertante and the Saint-Saens Sonata.

The student should also give evidence of his ability to read compositions of moderate difficulty at sight, and should demonstrate sufficient ability to take part in the performance of easier ensemble numbers and hold the second clarinet chair in symphonic works. He should have acquired sufficient pianistic ability to play simple accompaniments.

3. END OF THE FOURTH YEAR. The candidate for graduation should show adequate technique and musicianship for the competent performance of such works as the Mozart Concerto, the Debussy Rhapsodie and the Weber Concerto No. 2; also a knowledge of such sonatas for clarinet and piano as those by Brahms, Reger, Mason, Sowerby, Bernstein and Tuthill.

During the four year course the student should have had at least two full years of practical orchestral experience, two years of band and two years of ensemble. He should be competent to hold the first clarinet chair in symphonic works.

He should further demonstrate adequate ability in sight reading. He should be able to sight read simple piano accompaniments and be able to transpose fluently parts written for C and A clarinets on the B♭ clarinet.

G. Trumpet Requirements

1. ENTRANCE REQUIREMENTS. To enter the four year degree course in trumpet the student should have an elementary knowledge of the pianoforte.

He should have acquired the fundamentals of good tone production and breath control; and elementary knowledge of all major and minor scales and arpeggios; and the ability to perform material such as is contained in the Williams method, Part II of Lillys, Book II or the like. He should have studied one or more solo numbers of good musical quality such as Balay, Petite Piece Concertante or Fitzgerald, Modern Suite.

2. END OF SECOND YEAR. At the end of the second year of course the student should have acquired a thorough knowledge of all major and minor scales and arpeggios; have studied such etudes as may be found in the Arban Method, Gatti, Part II or Petit; [sic] 15 Technical Etudes, as written and also transposed as for C and A trumpets; have acquired the ability to perform well works of the difficulty of Balay, Piece de Concours and Ropartz, Andante and Allegro.

The student should also give evidence of his ability to read compositions of moderate

difficulty at sight, and should demonstrate sufficient ability to hold second chair in the performance of works for orchestra and band. He should have acquired sufficient pianistic ability to play simple accompaniments.

3. END OF FOURTH YEAR. The candidate for graduation should show adequate technique and musicianship for the competent performance of such works as the Haydn and Giannini concertos, the Fitzgerald Concerto in A flat, the Vidal Concertino and the sonatas of Hindemith and Sowerby.

During the four year course the student should have had full four years of orchestral and band experience and be able to transpose and play readily parts written for trumpets in all keys. He should be competent to hold first chair in orchestra and band, and be able to read at sight with facility. He should also be able to read simple piano accompaniments at sight.

H. Other Orchestral Instruments

1. ENTRANCE REQUIREMENTS. The entrance requirements for students of viola, bass, harp, woodwind and brass instruments stipulate the same degree of knowledge of the pianoforte as in the violin course. The student should also have acquired elementary technique of his instrument.

2. END OF SECOND YEAR. At the end of the second year the student should have acquired sufficient orchestra routine to fill satisfactorily a second desk position in symphonic works of lesser difficulty.

He should have acquired sufficient pianistic ability to be able to play simple accompaniments.

3. END OF FOURTH YEAR. The candidate for graduation should demonstrate a well-grounded technique and an able control of his instrument. He should be able to appear successfully as a soloist with orchestra in a concerto or concert piece for his instrument. He should have acquired thorough orchestral routine sufficient to enable him to hold a first desk position in a professional orchestra. He should also be able to read simple piano music at sight.

The student should have completed during his course, four years of orchestral training and a minimum of two years' training in the performance of chamber music.

To provide additional guidance in the selection of literature for the various orchestral instruments the Association has published Bulletins Nos. 20 and 31 which may be secured from the Secretary.

APPENDIX B

APPENDIX B

SELECTED PORTIONS OF BULLETIN NO. 45 OF THE NATIONAL ASSOCIATION OF SCHOOLS OF MUSIC--RECOMMENDATIONS IN THEORY, MUSIC HISTORY AND LITERATURE[1]

Theory

Before graduation the candidate for any undergraduate degree in music should have exhibited competence in the following respects:

Dictation

(Dictation examples should be performed as musically as possible, following generally accepted dictation techniques.)

1. Ability to write from dictation--major, minor, modal, and chromatic melodies correctly in various rhythms. . .

. . .

2. Ability to write two-part counterpoint from dictation.

. . .

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[1]National Association of Schools of Music, Recommendations in Theory,. . .op. cit., pp. 1-8.

3. Ability to identify harmonic progressions from dictation. The student should be required to write at least the soprano line, bass line, and full harmonic analysis.

. . .

Sight Singing

1. Ability to sing at sight melodies chosen from a fairly wide range of styles and periods. Included should be examples of modulation, rhythmic complexity, chromaticism, modal characteristics, and of contemporary style.

. . .

2. Ability to sing at first sight any of the parts of a standard oratorio or of other choral or instrumental works of comparable difficulty.

. . .

Harmony and Counterpoint

1. Ability to write appropriate settings (including original work) in the following media:
   a. Choral
   b. Keyboard
   c. Instrumental

. . .

2. Ability to demonstrate in the above such basic devices as:
   a. The use of non-harmonic tones

b. Imitation at the octave and at the fifth

c. Augmentation, diminution, and inversion.

. . .

Harmony at the Keyboard

1. Ability to harmonize simple melodies, including familiar folk and patriotic songs.

. . .

2. Ability to transpose in a manner suited to the student's needs, e.g. playing a B flat instrumental part at concert pitch on the piano or reading a hymn or song accompaniment in a different key than that in which it was written.

. . .

3. Ability to play simple modulations.

. . .

Structural and Harmonic Analysis

(Here are fused such skills as structural, harmonic, metrical, rhythmic, contrapuntal analysis and the role of modulation, and their function in the art of music defined.)

1. Ability to recognize by ear and from the score such smaller forms as a phrase extended by cadence evasion, a period in parallel construction, a period in contrasting construction.

. . .

2. Ability to analyze examples of the smaller forms, by ear and from score.

. . .

3. Ability to analyze by ear and from the score the larger forms commonly used by the classic and early romantic composers.

. . .

4. Ability to analyze from the standpoint of form any of the moderately difficult fugues of the Well Tempered Clavier.

. . .

Desirable Related Skills Resulting from Theory Study

1. Ability to sing from memory familiar folk and patriotic songs.

. . .

2. Ability to play simple music by ear on own instrument.

. . .

3. Ability to read treble, bass, alto, and tenor clefs.

. . .

4. Ability to play simple accompaniments at the keyboard.

. . .

2. [sic] Ability to follow the notation of a melody and a two-, three-, or four-part composition

and to indicate wherever a performance heard differs in rhythm or pitch from the printed score.

Music History and Literature

Before graduation the candidate for an undergraduate degree in music should have exhibited competence in keeping with his status in the following respects.

1. The ability to read and discuss representative scores from Gregorian Chant to the present and to recognize the style of any work in performance.

. . .

2. Acquaintance with
   (a) authorative editions of the works of major composers within his field of concentration and
   (b) important books in the areas of biography, reference (music dictionaries and encyclopedias in English), musicianship, history and literature.

. . .

3. Knowledge of the various stages of musical style in
   (a) vocal music (solo and choral)
   (b) keyboard music

(c) chamber music

(d) instrumental solo music

(e) opera

(f) symphonic music

This also implies aural and visual familiarity with the significant works in these categories, and a comprehension of the cultural environment in which they were conceived.

. . .

4. The ability to define terms and to present factual information concerning the areas of biography, history, style-technique, musical instruments, and performance practice.

. . .

5. The ability to discuss in good English (orally or in writing) representative works of musical art in relation to their cultural environment.

APPENDIX C

APPENDIX C

SAMPLE PHRASES USED IN PERSONAL LETTERS TO PANEL MEMBERS

I am. . .calling on a panel of seven to help me determine what schools in the United States are most known for their production of orchestral musicians.

Of course the names [of the panel] will be kept confidential and will not appear in the draft of the dissertation.

APPENDIX D

APPENDIX D

THE TEN MUSIC SCHOOLS OF THE UNITED STATES MOST KNOWN FOR THEIR PRODUCTION OF ORCHESTRAL MUSICIANS

_____ Cincinnati Conservatory
_____ Curtis Institute of Music
_____ Eastman School of Music
_____ Indiana University (School of Music)
_____ Juilliard School of Music
_____ Michigan State University (School of Music)
_____ New England Conservatory
_____ Northwestern University (School of Music)
_____ Oberlin Conservatory
_____ Peabody Institute of Music
_____ University of Illinois (School of Music)
_____ University of Michigan (School of Music)
_____ University of Southern California (School of Music)
_____ _____
_____ _____

Background of Panel Member

School that awarded his Bachelor's Degree _____

Years of Orchestral Experience

Orchestra	Number of Years
_____	_____
_____	_____

APPENDIX E

APPENDIX E

LETTER WRITTEN TO MUSIC SCHOOL EXECUTIVES

Presently under study at the Division of Music of West Virginia University are the problems created by increased academic admissions requirements, by increased university-wide room utilization and by computerized scheduling procedures.

We would appreciate it if you would briefly tell us: (1) what problems you have had with the admission of talented, but not academically brilliant, musicians, and (2) what problems you have had with the academic schedule conflicting with rehearsals and events of the School of Music, and, if so, what solutions you have developed, are pending or are contemplated.