

AN INVESTIGATION OF THE USE OF THE MUSICAL APTITUDE  
PROFILE WITH COLLEGE AND UNIVERSITY  
FRESHMAN MUSIC STUDENTS

by  
Robert E. Lee

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Chairman:  
Associate Professor Edwin Gordon

Co-Chairmen:  
Professor Leonard S. Feldt

### Problems of the Study

The purpose of the study was to gather data pertaining to the use of the Musical Aptitude Profile<sup>1</sup> with college and university freshman music students.

The main problem of the study was to establish normative data for midwest college and university freshman music students on the Musical Aptitude Profile. Additional problems of the study bearing on the Musical Aptitude Profile were: 1) the investigation of the reliability of the test battery for college and university music students; 2) the investigation of the relationships between freshman music students' test scores and various course grades; and 3) the investigation of the relationships between college choir members' test scores and performance ability as rated by their choir director.

### Design of the Study

The Musical Aptitude Profile was administered to a total of 508 college and university students. Freshman music students in the sample (N = 332) were enrolled in five midwestern colleges and universities in representative categories.

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1. E. Gordon, Musical Aptitude Profile (Boston: Houghton Mifflin Company, 1965).

The estimated reliability coefficient for the complete test for freshman music students was .90. The reliabilities for the total tests were .79, .83, and .85.

In spite of the fact that freshman music students, as a group, find the test less difficult than public school students, subtest scores show sufficient variability for discriminating among average and below average students. To a lesser extent, subtests discriminate among students who score at the upper extremes. Total test and complete test scores show sufficient variability for discriminating among students at all levels.

Intercorrelations among the tests indicate that the various tests in the battery do measure quite different dimensions of musical aptitude.

Composite test scores of college choir members yielded a correlation of .25 with performance ability ratings (N = 52). Composite test scores of freshman music students yielded a correlation of .35 with music theory grades and .38 with total music grades (N = 57). Freshman music students' total grade point averages generally yielded comparatively low or negative correlations with students' test scores. These data indicate that test scores are more related to musical endeavors than to factors associated with academic achievement.

### Conclusions

Resultant data suggest that although the Musical Aptitude Profile was designed for use with public school students, it can serve as a relatively effective musical aptitude test for use with college and university music students. This conclusion rests on the fact that 1) the test scores are reasonably reliable for college and university freshman music students, 2) the test scores display considerable variability for college and university freshman music students, 3) the various subtests and total tests measure quite different dimensions of musical aptitude for college and university freshman music students, 4) test results are more related to musical endeavors than to academic achievement for college and university freshman music students, and 5) test norms are available specifically for college and university freshman music students.

Therefore, college and university freshman music students' Musical Aptitude Profile scores may be used by teachers and administrators as one of many criteria in evaluating prospective students' vocational and avocational objectives. Specifically, test results may be used to determine the relative standing of a music student



through the use of norms provided in this dissertation. Also, music students' standard scores may be compared to the test results of a representative sample of public school students through the use of norms provided in the published test manual. Finally, the various musical aptitudes of a given student may be evaluated by comparing his test results on each of the subtests and total tests of the battery through the use of norms provided in this dissertation. That is, scores may be used for adapting instruction to meet the individual needs and abilities of students according to their demonstrated musical strengths and weaknesses.

Abstract approved:

Dissertation supervisor

Title and Department:

Associate Professor of Music

Date:

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## Chapter I

### PURPOSE OF THE STUDY

#### Introduction and Purpose

The administration of standardized general academic achievement tests and special aptitude tests to college and university freshman students has become common practice among institutions of higher learning. These tests, developed specifically for college and university students, evidently provide information which aids administrators and teachers in the educational and vocational guidance of students in various academic areas.

Although it is true that freshman music students take general academic tests and intelligence tests along with all other freshman students, standardized aptitude tests which are related to their specific major subject matter area are not usually administered to music students. When musical aptitude tests are administered to students, the tests which are given are those which were primarily developed for use with public school students. These music aptitude tests, however, do not provide adequate information pertaining to the interpretation of scores earned by specific groups of college and

university students. Therefore, it would seem that there is a need for a standardized musical aptitude test which can be used at the college and university level. This test should be normed on college and university students and validated for those purposes which an instrument designed for this level may be expected to serve.

College and university music teachers and administrators may use the results from a musical aptitude test for a variety of purposes. Teachers may utilize test scores to diagnose students' musical strengths and weaknesses for the purpose of adapting instruction to meet the individual musical needs and abilities of students. Administrative officials may compare their students with musically gifted high school students and with music students attending other colleges and universities. Admitting committees may use test results as one of many criteria in evaluating prospective students' vocational and avocational objectives.

The Musical Aptitude Profile<sup>1</sup> has proved to be an effective test when used with public school students. Therefore, it was hypothesized that this test battery

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1. E. Gordon, Musical Aptitude Profile (Boston: Houghton Mifflin Company, 1965).



might function as a useful test with older and more musically select students if pertinent interpretive data were obtained.

#### Description of the Musical Aptitude Profile

The Musical Aptitude Profile was standardized on a representative sample of public school students in grades 4 through 12. Over 12,000 students from cities and towns throughout the United States were tested, and separate norms were established for each grade level. Additional norms for students participating in school music performance organizations were determined at three levels: elementary school, junior high school, and senior high school.

Reliability coefficients, which were computed separately for each school grade level (4 through 12), ranged generally in the .70's and .80's for the various subtests, in the .80's and .90's for the total tests, and in the .90's for the complete test.<sup>1</sup> The reliability coefficients are comparable to those generally reported for academic aptitude tests.

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1. E. Gordon, Manual: Musical Aptitude Profile (Boston: Houghton Mifflin Company, 1965), 50.

Preliminary evidence of the concurrent validity of the Musical Aptitude Profile for public school students has been reported by independent investigators at various grade levels both for musically select and for musically unselected students. Coefficients of correlation between composite test scores and performance ability of high school students ranged from .26 to .35.<sup>1</sup>

A three-year longitudinal study of the predictive validity of the Musical Aptitude Profile is presently in its third year. In this study, which was designed by the test author, all fourth and fifth grade students enrolled in four randomly selected schools were given musical instruments and weekly class instruction. Validity coefficients were determined which represent the power of the Musical Aptitude Profile to predict success in instrumental music as measured by judges' impartial evaluations of students' instrumental performances, an objective musical achievement test of music reading, and teacher ratings. The coefficients of predictive validity for

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1. R. L. Fosha, A Study of the Concurrent Validity of the Musical Aptitude Profile (Ph.D. dissertation, University of Iowa, 1964), 63; and V. V. Tarrell, An Investigation of the Validity of the Gordon Musical Aptitude Profile (Ph.D. dissertation, University of Iowa, 1964), 42.

these combined unweighted criteria with Musical Aptitude Profile composite test scores were .60 at the end of the first year of the study and .70 at the end of the second year.<sup>1</sup> These figures compare favorably with validity coefficients of standardized intelligence tests, although heretofore the validity coefficients of artistic measures have customarily been lower than the predictive validity coefficients reported for tests of academic aptitude.<sup>2</sup>

The basic musical factors measured by the Musical Aptitude Profile are classified into three main divisions. Each of the three main divisions was found to be more closely related to musical achievement of the type measured by the individual divisions of the test than to the other two divisions of the test.<sup>3</sup>

The three main divisions of the test are Tonal Imagery, Rhythm Imagery, and Musical Sensitivity. There are two separate subtests in each of the non-preference tests, Tonal Imagery and Rhythm Imagery. They are Melody and Harmony for the former, and Tempo and Meter for the

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1. Gordon, Manual, 70.

2. A. Anastasi, Psychological Testing, 2nd edition (New York: Macmillan Company, 1961), 400.

3. Gordon, Manual, 78.

latter. The preference test, Musical Sensitivity, consists of three separate subtests. They are Phrasing, Balance, and Style.

The complete battery of seven tests, including practice selections and directions, is recorded on high fidelity magnetic tape. The tests do not include historical or technical facts about music. For specific tests, students are asked only to compare a selection with a musical answer and to indicate whether the selection and musical answer are alike or different, or exactly the same or different, or to indicate which of two renditions is more musical. The student has an answer sheet on which to indicate his choice. If the student is not sure of the answer to a given exercise, he is instructed to mark the question mark (?) column, indicating that he is "in doubt."

Eleven normalized standard scores and percentile rank equivalents are derived from the test battery: one score for each of the seven subtests, a total score for each of the three total tests, and a composite score for the complete battery. Each of the four non-preference subtests consists of 40 items. Each of the three preference subtests consists of 30 items--making a total of 250 items for the complete battery.



The Musical Aptitude Profile is unique in several ways: stringed instruments, the violin and cello, are used as performing media; musical performers are nationally known professional musicians; and the musical examples are original. Furthermore, preference tests utilizing specially composed music are included in the test battery; verbal instructions are made by a professional announcer; and electronic test scoring service is available for the test battery.

#### Statement of the Problem

The specific problems of the study were to:

1. establish normative data for midwest college and university freshman music students on the Musical Aptitude Profile;
2. derive information bearing on the reliability of the Musical Aptitude Profile specifically for college and university freshman music students;
3. investigate the relationships between the scores of university freshman music students on the Musical Aptitude Profile and the music theory grades, music grade

point averages, and academic grade point averages of these students;

4. investigate the relationships between the Musical Aptitude Profile scores of college choir members and ratings of their musical aptitude as determined by their choir director; and
5. compare the mean Musical Aptitude Profile scores of college choir students to the means earned by university students enrolled in a general psychology class.

## Chapter II

### RELATED STUDIES AND AN ANALYSIS OF NORMATIVE DATA PROVIDED WITH CURRENT MUSICAL APTITUDE TESTS

To the writer's knowledge, there have been no studies published bearing on the problem of the establishment of standardized musical aptitude tests norms for use with college and university music students. In instances where college and university music students have been the experimental subjects in studies of standardized musical aptitude tests, the prime objective has usually been the investigation of the validity of the tests; the investigation of the reliability of the tests has occasionally been a secondary objective.

#### Validity and Reliability Studies

Several investigators have used music students' achievement in ear training and sight singing as criteria for estimating the validity of standardized musical aptitude tests.

Wright<sup>1</sup> reported a correlation coefficient

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1. F. A. Wright, "The Correlation between Achievement and Capacity in Music," Journal of Educational Research XVII (Jan. 1928), 50-56.