

**A COMPARISON OF THE MUSICAL APTITUDE PROFILE AND
THE SEASHORE MEASURES OF MUSICAL TALENTS**

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TABLE OF CONTENTS

CHAPTER		PAGE
I.	PURPOSE OF THE STUDY	1
	Introduction	1
	Construct Validity Before 1939	2
	Construct Validity After 1939	4
	Problem of the Study	6
II.	METHODS AND PROCEDURES	8
	A Description of the Seashore Measures of Musical Talents	8
	A Description of the Musical Aptitude Profile	11
	Design of the Study	15
	Analysis of the Data	18
III.	PRESENTATION AND INTERPRETATION OF DATA	19
	Intercorrelations Among the Various Subtests Comprising the Seashore Measure of Musical Talents	20
	Intercorrelations Among the Various Subtests Comprising the Musical Aptitude Profile	22

CHAPTER	PAGE
	Intercorrelation Coefficients Among Subtests
	Comprising the Seashore Measures of Musical
	Talents and the Musical Aptitude Profile 25
	Teacher Ratings 29
IV.	SUMMARY AND CONCLUSIONS 32
	Summary 32
	Conclusions 32
	APPENDIX 34
	BIBLIOGRAPHY 36

CHAPTER I
PURPOSE OF THE STUDY
I. INTRODUCTION

Carl Seashore is regarded by many people as the man most prominently associated with music aptitude testing. The Seashore Measures of Musical Talent were published in 1919 after many years of experimentation in music psychology at the University of Iowa.¹ This test of musical aptitude was widely accepted among music educators, and is probably the most well known test in use today.

In the years following publication of the Seashore Measures of Musical Talent, a number of new music aptitude tests were published. Authors of these tests offered different viewpoints concerning the description and measurement of musical aptitude. Considering the more recent musical aptitude tests, important changes have occurred since the publication of the original Seashore Measures of Musical Talent. Differences are basically related to the construct validity of the various tests.

¹C. E. Seashore, Measures of Musical Talent, (New York: Columbia Phonograph Co.) 1919.

II. CONSTRUCT VALIDITY BEFORE 1939

Carl Seashore stated that musicality consisted of more than sensory capacities. Imagery, musical feeling, and memory were also important in his total description of musical aptitude. Musical talent was defined by Seashore as "a hierarchy of talents, many of which are entirely independent of one another".² Further, he believed that hearing was the most important capacity, since music must be heard before it could be explained in acoustical terms. Objectivity could be achieved if the specific capacity to be measured was isolated, and if conclusions were limited to the specific capacity being measured.

The identification of musical aptitude by analysis of constituent elements has been referred to as the theory of specifics.³ The specific sensory factors which were considered to be basic were pitch, loudness, time, and timbre. These sensory factors were believed not to vary with chronological age, musical training, or academic intelligence. Although rhythm, volume, and consonance were considered more complex forms of sensory capacity, Seashore assumed that they could also lend themselves to objective measurement.

²C. E. Seashore, The Psychology of Musical Talent, (New York: Silver Burdett Co., 1919) p. 6.

³H. Lowery, "On the Integrative Theory of Musical Talent," Journal of Musicology, 1940, V. 2.

The Seashore Measures of Musical Talent measured the capacities of pitch, intensity, time, consonance, and auditory memory span. Six years after publication of the original test, a rhythm test was added, and a timbre test replaced the consonance test.

The Seashore method of testing the subjects' sensory capacities requires the subject to compare two sound stimuli for each test item. The subjects hear electrically produced sound stimuli which has no true musical dimensions.

A revised edition of the Seashore Measures of Musical Talent was published in 1939. The new Seashore battery contained only minor revisions.⁴

After 1930, some educators began questioning the importance of sensory capacities in the measurement of musical aptitude. These educators believed musicality should be measured through perceptual responses, because, in their opinion, musical aptitude was more than a series of specific independent capacities. Musicality, they felt, depended upon "an awareness of tonal-rhythmic configurations and emotional responses".⁵

⁴Joseph G. Saetveit, Don Lewis, Carl Seashore, Measures of Musical Talents, (New York: The Psychological Corporation, 1939).

⁵J. L. Mursell, The Psychology of Music, (New York: W. W. Norton and Co., Inc., 1937), p. 323.

III. CONSTRUCT VALIDITY AFTER 1939

Prior to 1939 all standardized tests of music aptitude were constructed as measures of specific sensory capacities. With the appearance of the Wing Standardized Tests of Musical Intelligence, an alternate philosophy of construct validity had been firmly suggested to music educators.⁶

Herbert Wing's approach to construct validity, for example, reflects the British belief in the omnibus theory of music aptitude testing. The British view suggests that musical examples should be used for testing a specific musical capacity, and as a result, musical factors influencing musicality will be present in the musical stimulus. Further, this construct philosophy also reflects the British belief that musical talent is related to musical preference.

McLeish investigated the relationship among the various subtests comprising the Seashore Measures of Musical Talents and the Wing Standardized Tests of Musical Intelligence.⁷ The purpose of his study was to determine if there were significant relationships among the tests even though the construct validity of the tests suggested the contrary. Although McLeish employed one hundred

⁶Herbert Wing, Wing Standardized Tests of Musical Intelligence, (Sheffield, England: Sheffield City Training College, 1939).

⁷J. McLeish, "The Validation of Seashore's Measures of Musical Talent by Factorial Methods," British Journal of Psychology, Statistics Section, 1950, V. 3, 129-140.

college students, and used the 1919 edition of the Seashore test, he was satisfied that a significant relationship between the two test batteries was demonstrated. The correlation coefficient representing the relationship between the two composite scores of the test batteries was .72.

In another study, Bently investigated the intercorrelations among four relatively recent musical aptitude tests.⁸ These tests were the: Kwalwasser Music Talent Test, Gaston Test of Musicality, Whistler-Thorpe Music Aptitude Test, and the Wing Test of Musical Aptitude and Achievement. Bently found, using high school students, significant relationships among tests in which musical stimuli were used and comparatively striking dissimilarities between tests in which musical stimuli were utilized and tests in which acoustical stimuli were used.

These contrary findings may be attributed to various factors. For example, the reliability of the tests comprising the test batteries, the size and especially the homogeneous nature of the experimental group, and inconsistent test administration procedures could account for most of the discrepancy between the results of the two studies.

⁸R. R. Bently, "A Critical Comparison of Certain Musical Aptitude Tests," Thesis: University of Southern California, 1956.

IV. PROBLEM OF THE STUDY

With the publication of the Musical Aptitude Profile, the music educator is now offered another approach to the measurement of musical aptitude.⁹ A comparison of the Seashore Measures of Musical Talents and the Musical Aptitude Profile indicates very unique differences between the construct validity of the tests.

The sound source for all tonal stimuli used in the Seashore Measures of Musical Talents is a General Radio beat-frequency oscillator. Musical examples used as sound stimuli in the Musical Aptitude Profile are performed on string instruments. The subtests of the Seashore Measures of Musical Talents are all non-preference tests. The Musical Aptitude Profile contains both preference and non-preference tests. The Seashore battery measures only specific sensory capacities. The Musical Aptitude Profile measures responses to melody, harmony, rhythm, and musical expression.

The specific problem of this study was to investigate, through the use of comparatively strict experimental controls, the inter-relationships among the various tests comprising the Seashore Measures of Musical Talents and the

⁹Edwin Gordon, Musical Aptitude Profile, (Boston: Houghton Mifflin Publishing Co., 1965).

Musical Aptitude Profile, to determine if objective differences between the batteries could be found which would reinforce the subjective differences associated with the construct validity theories of the test authors.

CHAPTER II

METHODS AND PROCEDURES

I. A DESCRIPTION OF THE SEASHORE MEASURES OF MUSICAL TALENTS

The revised 1939 version of the Seashore Measures of Musical Talents is recorded on one 33 1/3 RPM disk recording. The test battery consists of six tests which measure the capacities of pitch, loudness, rhythm, time, timbre, and tonal memory.

In the Pitch Test, pairs of tones are presented to the subjects, who must determine whether the second tone is higher or lower in pitch than the first tone. In the Loudness Test, the subjects indicate if the second of two tones is stronger or weaker than the first. The Rhythm Test consists of pairs of rhythmic patterns, the subjects deciding if the patterns constituting each pair are the same or different. The Time Test consists of pairs of tones, differing in duration. The subject must determine whether the second tone is longer or shorter than the first tone. In the Timbre Test the subjects respond to whether the second of two tones is the same or different in tonal quality. In the Tonal Memory Test the subjects hear two short series of tones, consisting of three, four, or five pitches. The second example of each series will have one tone altered in pitch. The subjects must decide which tone has been changed.

The sound source of all tonal stimuli used in the Seashore Measures of Musical Talents is a General Radio beat-frequency oscillator. The test manual includes directions which are to be read to subjects before the playing of each test. There are no practice or trial test questions on the recording. Subjects are only asked to listen to a few examples from the test without marking the answer sheet before they actually begin taking the test. If the subject is not sure of a correct answer, he is instructed to guess. The subject's musical aptitude is indicated by comparing his test scores on the six subtests with norms provided in the test manual. Norms are in the form of raw scores converted to percentile ranks for Grades 4-5, 6-8, and 9-16.

Subtest reliabilities, based on internal consistency, are reported in the test manual. Reliability coefficients for high school students are reported in Table 1. Reliability coefficients range from .68 (Timbre) to .84 (Pitch). No reliability coefficient for the composite test score is reported in the test manual.

TABLE I
RELIABILITY COEFFICIENTS FOR THE SEASHORE MEASURES
OF MUSICAL TALENTS*

<u>Test</u>	<u>Reliabilities</u>
Pitch	.84
Loudness	.74
Rhythm	.64
Time	.71
Timbre	.68
Tonal Memory	.83

*Reliability coefficients were obtained from the Seashore Measures of Musical Talents test manual, page 7, 1960 edition.