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**Using music aptitude and timbre preference test results to  
predict performance achievement among beginning band  
students**

Belczyk, Mark Edward, Ph.D.

Temple University, 1992

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Title of Dissertation: USING MUSIC APTITUDE AND TIMBRE PREFERENCE TEST RESULTS TO PREDICT PERFORMANCE ACHIEVEMENT AMONG BEGINNING BAND STUDENTS

Author: MARK EDWARD BELCZYK

Read and Approved by: [Handwritten signatures: Eden E. Hoehn, Mark W. A., Eric R. Meyer, Mark [unclear], Paul L. Watts]

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USING MUSIC APTITUDE AND TIMBRE PREFERENCE TEST RESULTS  
TO PREDICT PERFORMANCE ACHIEVEMENT  
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A Dissertation Submitted to the  
Temple University Graduate Board

in Partial Fulfillment of the  
Requirements for the Degree  
DOCTOR OF PHILOSOPHY

by

Mark Edward Belczyk

May, 1992

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CHAPTER I  
PURPOSE OF THE STUDY

Introduction

In most cases, band directors know little about students before instruction begins. Opinions solicited from general music and classroom teachers may help, but teachers can provide only subjective assessments of students. Scores on tests of intelligence and academic achievement are often available to the band director, but they offer limited information about students' potential to learn music.

Results of music aptitude and timbre preference tests, however, can be used to obtain objective information about students. When a music aptitude test has been shown to be a valid predictor of achievement on a band instrument, test results can be used for several purposes: to encourage students with high aptitudes to participate in band, to adapt instruction to students' individual strengths and weaknesses, and to provide parents with realistic expectations about their child's potential in music. When a timbre preference test has been shown to be a valid predictor of achievement on a band instrument, test results can be used to recommend a suitable instrument or instruments for a student to study.

In many band programs, instruction on band instruments is first offered to students enrolled in fourth grade. Two standardized music aptitude tests that are designed to be used with fourth-grade students are the Intermediate Measures of Music Audiation (IMMA) and the Musical Aptitude Profile (MAP).<sup>1,2</sup> IMMA is composed of one Rhythm and one Tonal subtest. MAP comprises seven subtests: Melody, Harmony, Tempo, Meter, Phrasing, Balance, and Style.

The seven subtests of MAP require a total administration time of one hour and fifty minutes, whereas the two subtests of IMMA require a total of only forty minutes. Because of the time necessary for testing, the administration of MAP may not be possible. In a classroom setting when a limited amount of time is available for testing, IMMA may be more practical than MAP.

Although the predictive validity of IMMA for beginning band students has been established, a substantial amount of the variance in performance achievement scores remains unexplained by IMMA scores alone.<sup>3</sup> Some of that remaining variance may be accounted for by students' preferences for

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<sup>1</sup> Edwin E. Gordon, Intermediate Measures of Music Audiation (Chicago: G.I.A. Publications, Inc., 1982).

<sup>2</sup> Edwin Gordon, Musical Aptitude Profile (Boston: Houghton Mifflin Co., 1965, 1988).

<sup>3</sup> Edwin E. Gordon, "A Longitudinal Predictive Validity Study of the Intermediate Measures of Music Audiation," Council for Research in Music Education 78 (1984).