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A study of the effects of two types of tonal pattern instruction on the audiational and performance skills of first-year clarinet students

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A STUDY OF THE EFFECTS OF TWO TYPES OF TONAL PATTERN INSTRUCTION ON THE AUDIATIONAL AND PERFORMANCE SKILLS OF FIRST-YEAR CLARINET STUDENTS

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CHAPTER ONE

PURPOSE OF THE STUDY

Introduction

One of the most common goals in instrumental music instruction is to teach students to read music. The extent of students' success in music reading is dependent upon many factors. Investigational research by Schleuter, Froseth, and Young, and experimental research by Jarvis, MacKnight, McCarthy, and Noble provide strong evidence that success in instrumental music reading is accounted for partially by students' music aptitudes.[1] Although other factors such as instrument preference, student attitude, and the quantity of time devoted to instruction and prac-

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[1]Stanley Schleuter, "Effects of Certain Lateral Dominance Traits, Music Aptitude, and Sex Differences with Instrumental Music Achievement," Journal of Research in Music Education, 26 (1978), 22-31; James Froseth, "Using MAP Scores in the Instruction of Beginning Students in Instrumental Music," Journal of Research in Music Education, 19 (1971), 98-105; William Young, "The Role of Musical Aptitude, Intelligence, and Academic Achievement in Predicting the Musical Attainment of Elementary Instrumental Music Students," Journal of Research in Music Education, 19 (1971), 385-398; William Jarvis, "The Effectiveness of Verbalization Upon the Recognition and Performance of Instrumental Music Notation," Dissertation Abstracts International, 42A (1981), 1528A (Rutgers University); Carol MacKnight, "The Effects of Tonal Pattern Training on the Performance Achievement of Beginning Wind Instrumentalists," Experimental Research in the Psychology of Music, 10 (1975), 53-76; James McCarthy, "The Effects of Individual Instruction on the Performance Achievement of Beginning Instrumentalists," Council for Research in Music Education Bulletin, 38 (1974), 1-16; and Robert Noble, "Effects of a Concept Teaching Curriculum on Performance Achievement in Elementary School Beginning Bands," Journal of Research in Music Education, 19 (1971), 209-215.

tice can help to promote achievement, many educators believe it is the quality of instruction that contributes most substantially to successful music reading performance.

Instrumental music instruction is influenced by the teacher's selection of materials as well as by the teacher's instructional style. Some researchers interested in the effectiveness and efficiency of instrumental music instruction have investigated the effects of various content and teaching styles on music reading achievement. Kress, who was interested in musical conservation, compared the effectiveness of two published method books and found neither to be superior.[2] Morehouse investigated the effectiveness of published supplementary materials and found that students who did not use those materials demonstrated better sight-reading skills than students who did use the materials.[3] Perhaps the use of supplementary material, in which there is more music to learn to read, may be overwhelming to the beginning instrumental student. Whitener compared the effectiveness of a performance-oriented approach to a comprehensive approach.[4] The intent in the latter approach was to have the students gain an understanding of discrete musical elements,

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[2]Herbert Kress, "An Investigation on the Effect Upon the Music Achievement and Music Performance of Beginning Band Students Exposed to Method Books Reflecting Piaget's Theory of Conservation," Dissertation Abstracts International, 42A (1981), 1528A (University of Colorado).

[3]Linda Morehouse, "An Examination of the Effectiveness of Supplementary Material on Music Reading for Beginning Instrumentalists," Dissertation Abstracts International, 42A (1981), 4758A (Catholic University of America).

[4]William Whitener, "Comparison of Two Approaches to Teaching Beginning Band," Journal of Research in Music Education, 30 (1982), 229-235.

form, and composition through discussions and demonstrations. Although Whitener found no evidence that the comprehensive approach was superior for developing students' performance skills, he did report that the approach was beneficial with regard to developing aural discrimination skills. In two separate studies, Noble and Whaley also investigated the effects of teaching musical understanding through discussions of music theory and music history.[5] Unlike Whitener, they reported that concept teaching was more effective than traditional instruction for improving students' performance skills. They did not, however, find consistent evidence that students in their respective experimental groups were better able to discriminate aurally. While older students in Whaley's study demonstrated considerable improvement in aural discrimination skill, younger instrumentalists in Noble's study did not. Perhaps concept teaching alone is not sufficient for the beginning instrumentalist.

Many music educators support the notion that effective learning occurs when students engage in active participation. Through two separate investigations of music teaching styles, D'Aurelio and Groeling were unable to support that notion.[6] An explanation of their findings might be

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[5]Noble, "Effect of," p. 214; and Garwood Whaley, "A Comparison of the Unit Study and Traditional Approaches for Teaching Musical Concepts and Skills Through School Band Performance," Dissertation Abstracts International, 38 (1977), 3357A (Catholic University).

[6]Guy D'Aurelio, "An Investigation of the Effects of Two Teaching Strategies on the Development of Skills in Detecting and Correcting Pitch and Rhythm Errors by Beginning Instrumental Music Students," Dissertation Abstracts International, 34 (1973), 6682A (University of Wisconsin); and Charles Groeling, "A Comparison of Two Methods of Teaching Instrumental Music to Fourth Grade Beginners," Dissertation Abstracts International, 36 (1975), 4319A (Northwestern University).

that they did not consider specific processes which are appropriate to music learning. It is difficult for beginning instrumentalists to learn through discovery because they have no way of knowing whether their realizations are either correct or useful. The questions of "what," "when," and "how" beginning instrumental students best learn to read music remain largely unanswered in the foregoing research.

Prominent music educators have recommended that instrumental music students should develop an aural understanding of music before they learn to read music.[7] An aural understanding of music can be developed through the process of audiation. To audiate is to hear music in the mind without the sound being physically present.[8] Some researchers have investigated their intuitions about the role of audiation in instrumental music through studying activities in which students "play by ear." In a descriptive study, Luce reported a positive relationship (.50) between students' abilities to sight-read and to reproduce on their instruments music that they perceived aurally.[9] Students in a study by Robinson were required to perform instrumentally through audiating their own composed

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[7]Charles Leonard and Robert House, Foundations and Principles of Music Education (New York: McGraw-Hill Book Co., 1972), pp. 241-242; John Sloboda, "The Psychology of Music Reading," Psychology of Music, 6 (1978), 15; Daniel Kohut, Musical Performance: Learning and Theory (New Jersey: Prentice-Hall Inc., 1985), p. 147; and Stanley Schleuter, A Sound Approach to Teaching Instrumentalists: An Application of Content and Learning Sequences (Ohio: Kent State University Press, 1984), p. 21.

[8]Edwin Gordon, Learning Sequences in Music: Skill, Content, and Patterns (Chicago: G.I.A. Publications Inc., 1984), p. 11.

[9]John Luce, "Sight-Reading and Ear-Playing Abilities as Related to Instrumental Music Students," Journal of Research in Music Education, 13 (1965), 104.

songs.[10] Those students demonstrated better progress in both performance skills and music achievement than did students who had received traditional instruction. Similar results were reported for students who received encouragement to "play by ear" in a study by Froseth.[11] It appears that instrumental performance skills can improve when students depend more upon their ears than upon their eyes.

To perform music with musical understanding requires the performer to audiate simultaneously several dimensions of music. Gordon suggests that musical understanding is developed most efficiently by learning to audiate separately the tonal and rhythm dimensions of music.[12] For beginning instrumentalists, Tietze found evidence to support the benefit of teaching those dimensions separately before teaching them in combination.[13] As a result of learning to audiate each dimension, students become able to internalize melodic relationships and rhythmic consistencies that give rise to the tonalities and meters of familiar music.[14] Students learning to perform on typical beginning band instruments must internalize (audiate) rhythm simply because there are no mechanical de-

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[10]William Robinson, "An Experiment to Determine the Effectiveness of Music Composition as an Aid to Musical Maturation in Fifth-Grade Beginning Wind Instrument Students," Dissertation Abstracts International, 31A (1971), 6652A (University of Georgia).

[11]James Froseth, "Individualizing Instruction in the Beginning Instrumental Music Class," Journal of Band Research, 8 (1971), 17.

[12]Gordon, Learning Sequences, p. 181.

[13]William Tietze, "The Effect of Pre-Band Melody and Rhythm Instruments on the Musical Learning of Beginning Fourth Grade Instrumental Students," Dissertation Abstracts, 19 (1958), 2103 (University of Iowa).

[14]For the purpose of this research, tonality refers only to the concept of mode, not to the concept of key.

vices on their instruments that they can use to interpret rhythm. That is not necessarily the case, however, for audiating tonally. Beginning woodwind instrumentalists, even more so than beginning brass instrumentalists, can easily avoid having to internalize melodic relationships because of the physical nature of their instruments. When students depend entirely upon the mechanical function of their instruments to interpret written music, tonal accuracy of their performance is not a guaranteed outcome. That is true because slight embouchure adjustments are often required to maintain appropriate intonation throughout a performance. Students who possess an aural understanding of music are able to know when to make those adjustments. There seems to be a fundamental need, therefore, to include the development of tonal audiation skills as a part of instrumental music instruction for woodwind students.

To help students develop a skill such as tonal audiation, it is necessary to select specific content. Gordon advises that students should begin to develop tonal audiation with music which is in major and harmonic minor tonalities.[15] By comparing the characteristic aural differences between major and harmonic minor tonalities, students develop an understanding of tonal syntax and consequently solidify their perception of each tonality. Other researchers concur with Gordon that the perception of tonality is most influenced by tonal syntax. Although only major tonality was investigated, it could be concluded from studies by Krumhansl, Davies, Deutsch, Sloboda, and Wassum that the perception and audiation of patterns representative of discrete tonal functions are essen-

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[15]Gordon, Learning Sequences, p. 63.

tial in providing students with an intrinsic tonal understanding.[16]

Given the importance of audiating specific tonal content, it appears that instrumental music teachers need a method to help their students develop a tonal vocabulary that proceeds logically from an aural to a visual understanding of music. That method may be provided through practical application of the music learning theory that is explained by Edwin Gordon in Learning Sequences in Music: Skill, Content, and Patterns. Gordon specifies a sequence of skill learning that may be used to enable students' development of a tonal vocabulary. There are two types of skill learning within that sequence. They are discrimination learning and inference learning. Neither type of learning is mutually exclusive of the other. Initial discrimination learning, however, provides readiness for subsequent inference learning.

Music skills that require discrimination learning are skills that are taught by rote. That is, students learn by listening to and then imitating their teachers. Many music educators, especially those who prefer the ideas of Suzuki, would agree with Kohut that imitation is an important teaching technique.[17] For beginning woodwind students, Lowe

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[16]Carol Krumhansl and Roger Shepard, "Quantification of the Hierarchy of Tonal Functions within a Diatonic Context," Journal of Experimental Psychology: Human Performance and Perception, 5 (1979), 579-594; John Davies, "Memory for Melodies and Tonal Sequences: A Theoretical Note," British Journal of Psychology, 70 (1979), 205-210; Diana Deutsch, "The Processing of Structured and Unstructured Tonal Sequences," Perception and Psychophysics, 28 (1980), 381-389; John Sloboda, "Experimental Studies of Music Reading: A Review," Music Perception, 2 (1984), 222-236; and Sylvesta Wassum, "Elementary School Children's Concept of Tonality," Journal of Research in Music Education, 28 (1980), 18-33.

[17]Kohut, Musical Performance, p. 113.

offered empirical evidence that rote learning through imitation is advantageous.[18] The brevity of Layne's study enabled him only to report an apparent superiority for the effect of imitative Suzuki techniques for beginning clarinet students.[19] From another sample of beginning clarinet students, Sperti reported that Suzuki-adapted rote learning techniques were superior to traditional instrumental teaching techniques with regard to the tonal, rhythm, and expressive dimensions as demonstrated through sight-reading skills.[20] In an investigative study, unrelated to Suzuki techniques, Sang examined two important subtleties of rote teaching through imitation.[21] He concluded that students demonstrate superior performance skills when their instruction includes accurate and frequent aural modeling from their teachers. He also concluded that more efficient use of class time is made when teachers devote less time to speaking and more time to modeling. In an application of music learning theory, the teacher's ability to provide live musical modeling is assumed.

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[18]Donald Lowe, "Suzuki and the Beginning Wind Class," Instrumentalist, 33 (1978), 29-32.

[19]Richard Layne, "A Comparative Investigation of Traditional and Modified Suzuki Teaching Techniques in Beginning Clarinet Instruction" (Ph.D. diss., University of Southern California, 1974).

[20]John Sperti, "Adaption of Certain Aspects of the Suzuki Method to the Teaching of the Clarinet: An Experimental Investigation Testing the Comparative Effectiveness of Two Different Pedagogical Methodologies" (Ed.D. diss., New York University, 1970).

[21]Richard Sang, "A Study of the Relationship Between Instrumental Music Teachers' Modeling Skills and Pupil Performance Behaviors," Council for Research in Music Education Bulletin, 91 (1987), 155-159.

The sequence of skills associated with discrimination learning is hierarchical; each skill provides a necessary readiness for all subsequent skills.[22] The most fundamental skill in discrimination learning is the aural/oral skill. To acquire that skill, students should first listen to specific tonal patterns that are sung by the teacher using a neutral syllable. Then the students should reproduce vocally that which they perceived aurally. Before the aural modeling and oral imitation begins, the teacher should establish the appropriate tonality to help students develop the audiation of specific tonalities. The audiation of major and harmonic minor tonalities is facilitated when the teacher models tonal patterns that are representative of tonic and dominant functions in each tonality. The intent of the aural/oral skill is to provide students with the opportunity to become familiar with a selected set of patterns through listening and singing, so that they may begin to develop a sense of tonality.

In addition to the Suzuki-related studies by Layne and Sperti, other researchers have also contributed to a persuasive argument in favor of singing activities for beginning instrumentalists. As a part of Froseth's approach to individualized instruction (cited earlier), three purposeful, and ultimately effective, singing activities were provided for the students in his experimental groups. Those students 1) engaged in singing folk song literature, 2) used their singing abilities to develop concepts of tonality, and 3) used singing to reinforce

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[22]Gordon, Learning Sequences, p. 22.