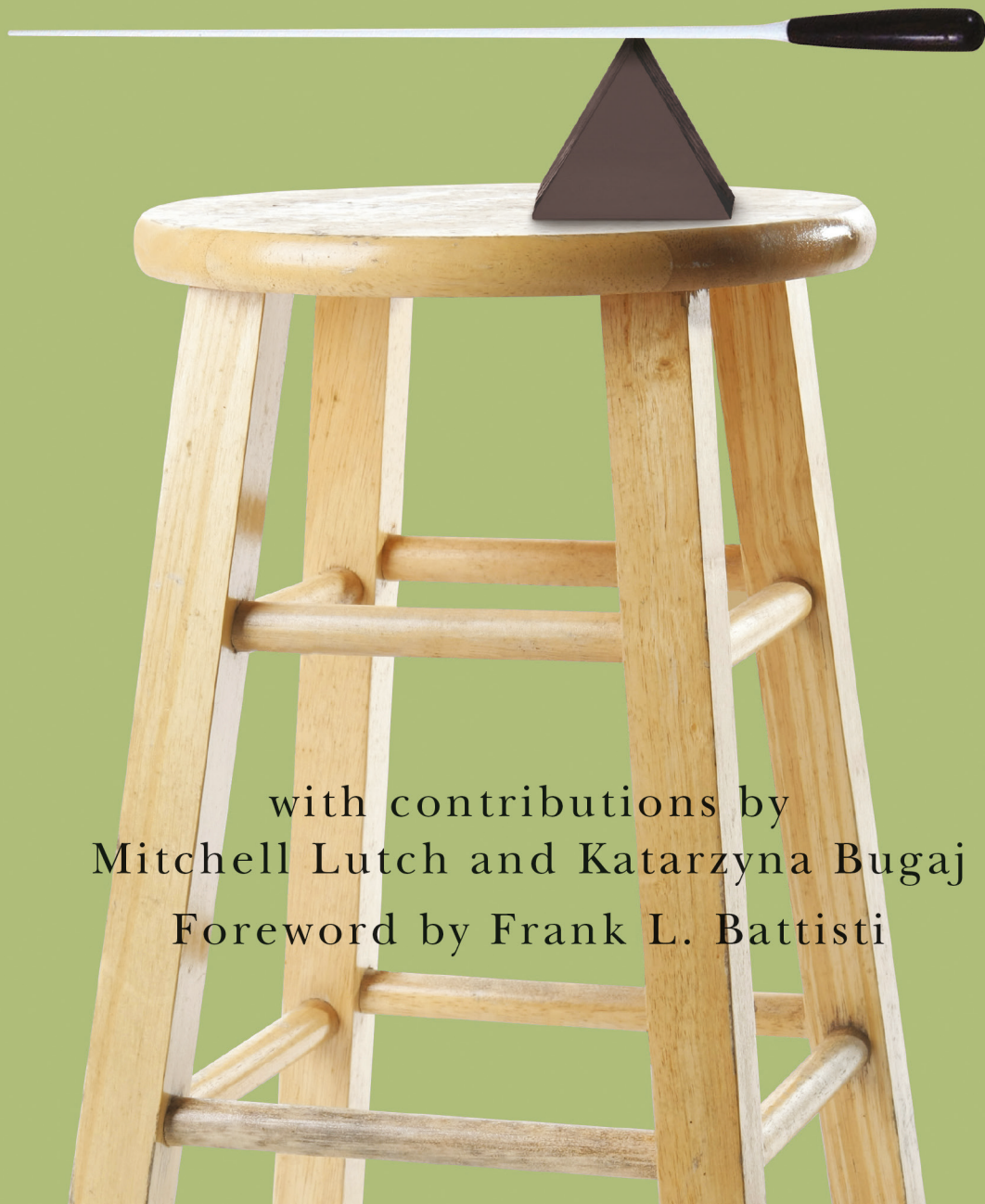


Evan Feldman and Ari Contzius

INSTRUMENTAL MUSIC EDUCATION

Teaching with the Musical and
Practical in Harmony

Third Edition



with contributions by
Mitchell Lutch and Katarzyna Bugaj
Foreword by Frank L. Battisti

Instrumental Music Education

Instrumental Music Education: Teaching with the Musical and Practical in Harmony, Third Edition, is intended for college instrumental music education majors studying to be band and orchestra directors at the elementary, middle school, and high school levels. This textbook presents a research-based look at the topics vital to running a successful instrumental music program, while balancing musical, theoretical, and practical approaches. A central theme is the compelling parallel between language and music, including “sound-to-symbol” pedagogies. Understanding this connection improves the teaching of melody, rhythm, composition, and improvisation.

The companion website contains over 120 pedagogy videos for wind, string, and percussion instruments performed by professional players and teachers, over 50 rehearsal videos, rhythm flashcards, and two additional chapters: “The Rehearsal Toolkit” and “Job Search and Interview.” It also includes over 50 tracks of acoustically pure drones and demonstration exercises for use in rehearsals, sectionals, and lessons.

New to this edition:

- A new chapter on teaching beginning band using sound-to-symbol pedagogies
- Expanded coverage for strings and orchestra, including a new chapter on teaching beginning strings
- A new chapter on conducting technique
- Expanded material on teaching students with disabilities
- Concert etiquette and the concert experience
- Expanded coverage on the science of learning, including the Dunning–Kruger effect and the effective use of repetition in rehearsal
- Techniques for improving students’ practice habits

Evan Feldman, D. M. A., is Conductor of the Wind Ensemble and Professor of Music at the University of North Carolina at Chapel Hill.

Ari Contzius is the Wind Ensemble Conductor at Washingtonville High School, Washingtonville, New York.

Mitchell Lutch is a former Associate Professor of Music and Director of Bands at Central College, Pella, Iowa.

Katarzyna (Kasia) Bugaj is Associate Professor of String Music Education in the College of Music at the Florida State University in Tallahassee, Florida.



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

Instrumental Music Education

Teaching with the Musical and Practical in Harmony

Third Edition

Evan Feldman

Ari Contzius

With contributions by Mitchell Lutch and Katarzyna Bugaj

Foreword by Frank L. Battisti

Third edition published 2021
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2021 Taylor & Francis

The right of Evan Feldman, Ari Contzius, Mitchell Lutch, and Katarzyna Bugaj to be identified as authors of this work has been asserted by them in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

First edition published by Routledge 2011
Second edition published by Routledge 2016

The New ASBDA Curriculum Guide. Written and compiled by The American School Band Directors Association © 1997 Belwin-Mills Publishing Corp., A Division of Alfred Music Publishing Co., Inc. All Rights Reserved

Library of Congress Cataloging-in-Publication Data

Names: Feldman, Evan, 1970– author. | Contzius, Ari, 1971– author. | Lutch, Mitchell, contributor. | Bugaj, Kasia, contributor. | Battisti, Frank L. writer of foreword.

Title: Instrumental music education: teaching with the musical and practical in harmony / Evan Feldman, Ari Contzius; with contributions by Mitchell Lutch and Katarzyna Bugaj; foreword by Frank L. Battisti

Description: Third edition. | New York: Routledge, 2020. |

Includes bibliographical references and index.

Identifiers: LCCN 2019059171 (print) | LCCN 2019059172 (ebook) | ISBN 9780367138134 (hardback) | ISBN 9780367138141 (paperback) | ISBN 9780429028700 (ebook)

Subjects: LCSH: School music—Instruction and study. | Instrumental music—Instruction and study.

Classification: LCC MT1 .F42 2020 (print) | LCC MT1 (ebook) | DDC 784.071—dc23

LC record available at <https://lcn.loc.gov/2019059171>

LC ebook record available at <https://lcn.loc.gov/2019059172>

ISBN: 978-0-367-13813-4 (hbk)

ISBN: 978-0-367-13814-1 (pbk)

ISBN: 978-0-429-02870-0 (ebk)

Senior Editor: Constance Ditzel
Senior Editorial Assistant: Peter Sheehy
Project Manager: Annie Rose

Copy Editor: Katie Finnegan
Proofreader: Wendy Telfer
Cover Design: Salamander Hill

Typeset in Caslon
by Newgen Publishing UK

Visit the companion website: www.routledge.com/cw/feldman

Contents

<i>Foreword by Frank L. Battisti</i>	<i>xiii</i>
<i>Preface</i>	<i>xv</i>
<i>Acknowledgements</i>	<i>xix</i>
UNIT 1 THE PROCESS OF TEACHING INSTRUMENTAL MUSIC	1
Chapter 1 An Introduction to Sound-to-Symbol	3
The Connection between Language and Music	4
An Introduction to Kodály	7
An Introduction to Orff's Schulwerk	8
An Introduction to Suzuki	9
An Introduction to Music Learning Theory	10
A Contemporary Approach to Kodály	11
Eclecticism and Hybridization	13
El Sistema	14
Modeling	14
On Adopting Sound-to-Symbol in the Instrumental Class	16
Further Reading	22
Chapter 2 Teaching Rhythm and Rhythm Reading: Audiation, Pulse, Pattern, and Meter	23
Dalcroze, Rhythm, and Movement	24
Using Movement in the Instrumental Music Classroom	26
Choosing a System of Rhythm Syllables	28
Teaching Rhythm Words	31
Using Flashcards	33
Rhythm Words and Reading	37
Teaching the Theory behind Rhythm Notation	40
Teaching Students to Feel Internal Subdivisions	45
Further Reading	51

Chapter 3	Tonality, Melody, and Singing	53
	The Importance of Tonal Understanding	53
	Teaching “Melodic Words”	54
	Singing in Rehearsal	56
	Teach Lots of Melodies!	57
	Further Reading	58
Chapter 4	Teaching Improvisation and Composition	59
	Incorporating Improvisation and Composition into the Rehearsal	59
	Teaching Improvisation	60
	Teaching Improvisation with Musical Patterns	61
	Using Improvisation to Teach Other Musical Fundamentals	64
	Teaching Composition	64
	Further Reading	68
Chapter 5	The History of Instrumental Music Education and Its Philosophy: A Brief Introduction	70
	Further Reading	80
Chapter 6	Special Topics: Constructivism, Concept Attainment, and Direct Instruction	81
	Teacher-Centered Approaches—Direct Instruction and Expository Teaching	81
	Constructivism and Discovery Learning	82
	Concept Learning	83
	Further Reading	87
UNIT 2	DIRECTING BANDS AND ORCHESTRAS	89
Chapter 7	Classroom Management	91
	Setting the Tone/The Importance of the First Weeks of School	92
	Behaviorism and Operant Conditioning in the Music Classroom	92
	Rules, Consequences, and Punishment in the Classroom	95
	Non-verbal Cues for Small Behavioral Problems	99
	Procedures—Moving Beyond the Right and Wrong of Rules	100
	Designing Classroom Procedures	100
	Maintaining and Enforcing Procedures	103
	Addressing Students about Discipline Issues	104
	Put Your Money Where Your Mouth Is	105
	Crucial Factors that Affect Classroom Management	106
	Involving Parents in Classroom Management	110
	Further Reading	112

Chapter 8 Curriculum, Assessment, and Grading	113
Issues Concerning the Curriculum	114
National and State Standards	115
NAfME Core Music Standards	116
Critics of National Standards	117
What to Teach—Curriculum Guides, Component Skills, Observable Behaviors	119
Assessment	122
Formative Assessment: Regular and Individual	124
Summative Assessment: Detailed and Systematic	125
Using Rubrics for Assessment	127
Assessing Conceptual Understanding	129
Writing Assignments	135
Tests of Declarative and Procedural Knowledge	137
Metacognition	142
Grading Systems	144
On Assessing Behavior, Participation, and Attendance	144
Merit and Demerit Grading Systems	147
Further Reading	152
 Chapter 9 Repertoire	 153
On Musical Quality	154
The Debate about “Educational Music”	156
Using Categories and Dispositions: Programming with Balance and Variety	157
Teaching the Curriculum through Repertoire—Comprehensive Musicianship through Performance	159
Form, Structure, and Theory	161
Study Sheets: Holding Students Accountable for What We Teach through the Repertoire	163
Resources for Finding Quality Literature	164
Repertoire Logs	165
Evaluating the Difficulty of a Work	165
Adjusting Scores to Fit the Characteristics of Your Ensemble	167
Transcriptions and Arrangements	167
Competition and the Non-Musical Benefits of Group Music-Making	168
Programming Music for Contests and Festivals	169
Programming Pop Music	170
Teaching Music through Pop Selections	171
Listening to Students and Giving Them Input	173
Further Reading	175
 Chapter 10 Score Study	 177
Phase 1—Macro	178
Phase 2—Micro	179
Phase 3—Macro-Redux	182

On Using Recordings	183
Marking the Score for Conducting	184
Further Reading	189
Chapter 11 On Conducting Technique	190
Movement Theory	190
Five Conducting Skills to Master	193
The Interpretive Dance—Give Yourself Permission to Look Foolish!	197
On Practicing	197
Advice from a Master Maestro	198
Further Reading	199
Chapter 12 Large Ensemble Set-Up	200
Measuring the Physical Space	200
Evaluating the Ensemble	201
Ten Basic Principles of Set-Up	202
Considering the Placement of Specific Instruments	202
Examining Sample Seating Charts for Band and Orchestra	205
Chapter 13 Rehearsals	213
<i>Part I: Basic Rehearsal Technique</i>	213
Macro—Micro—Macro	213
Communicating with the Ensemble	217
Engaging the Entire Ensemble During the Rehearsal	219
Student-Centered Learning	220
Lesson Planning—Structuring the Rehearsal	225
Rehearsing the Music	227
<i>Part II: Components of an Effective Rehearsal</i>	230
Types of Rehearsals—Balancing Pace, Intensity, and Detail	230
The Science of Learning and How to Apply It in Rehearsal	233
<i>Part III: Diagnosis of and Prescription for Common Problems</i>	238
Correcting Basic Rhythm and Note Issues in the Rehearsal	238
Developing Your Conductor Ear (Score-Study, Audiate, and Make Interpretative Decisions)	241
Listening for Common Problems	243
Experts and the Curse of Knowledge	245
The Dunning-Kruger Effect	246
Differentiated Instruction	246
Developing Your Rehearsal Thesaurus	250
Additional Ways to Enrich the Rehearsal Experience	253
Teaching Students Good Practice Habits	255
Further Reading	260

Chapter 14	Special Topics: Inclusion—Instrumental Music for Students with Special Needs	261
	Getting Started	261
	Teaching Strategies for Students with Learning Disabilities, Physical Disabilities, and Other Challenges	262
Chapter 15	Intonation	270
	Developing an Awareness of Pitch Discrepancies	271
	Defining the “Sound” of Sharp and Flat	272
	Teaching Students About Acoustics	273
	Implications for Performance	276
	Context and Pitch Center—The Unintentional Curse of Equal Temperament Tuners	278
	Using Drones and Long Tones to Develop Good Tone and Pitch	279
	Other Factors that Affect Intonation	281
	Tuning the Ensemble	288
	Tuning the Band	289
	Tuning the Full Orchestra	290
	The Tuning Toolkit	291
	Further Reading	293
Chapter 16	Directing Other Ensembles	294
	Alternative Ensembles	294
	Marching Bands/Pep Bands/Parade Bands	299
	Musical Pit Orchestra	300
	Conducting the Pit Orchestra—Tips and Strategies	302
	Jazz Ensemble	305
	Chamber Music	308
	Further Reading and Additional Resources	313
Chapter 17	Recruiting, Organizing, and Starting the Band and Orchestra	315
	Building Programs from the Bottom Up	315
	When Should the Study of Band and Orchestra Instruments Begin?	316
	Building and Maintaining a Balanced Instrumentation	317
	The Process of Recruiting	321
	The Eight Steps of the Recruiting Process	321
	After the First Year: Switching Students to New Instruments	338
	Retention	340
	Further Reading	343

Chapter 18	Sound-to-Symbol in the Beginning Instrumental Classroom	344
	Choosing a Method Book	344
	Using Traditional Versus Sound-to-Symbol Method Books	345
	Duke and Byo's <i>Habits of Musicianship</i>	345
	Music Reading Versus Language Reading	347
	<i>Your Musical Voyage: A Sound-to-Symbol Method</i>	347
	First Year Overview	353
	Instrumental Pedagogy Videos	357
	Further Reading	360
Chapter 19	String Pedagogy for Non-String Players	361
	Establishing Strong Fundamentals	361
	Set-up of Beginning Ensembles and Homogeneous Ensembles	363
	Beyond the Beginnings	364
	Logistical Considerations	367
	Further Reading	369
UNIT 3	ADMINISTRATIVE ISSUES	371
Chapter 20	Planning and Managing a Concert/Concert Etiquette	373
	Concert Preparation Schedule	374
	Managing the Concert	380
	Concert Etiquette for Audiences	386
	Aural Program Notes—Teaching Audiences What We Teach Our Students	387
	Further Reading	389
Chapter 21	Fundraising, Promotion, and Advocacy	390
	Fundraising	390
	Parent Organizations	394
	Promoting Events through Writing	396
	Advocacy—A Brief Introduction	398
	Further Reading	401
Chapter 22	Communication	402
	Reasons to Contact Parents	402
	Meeting with Parents in Person	405
	Email Etiquette	405
	Keeping a Log	410
	Communicating with Parents En Masse	411
	Student Handbooks	411
	Further Reading	413

Chapter 23 The Music Budget	414
Budget Lines and Codes	414
Purchase Orders	415
Income and Expenses	416
Writing Budget Requests	417
Researching Needs for Equipment and Supplies	420
Putting Items Out for Bid	420
Further Reading	423
 Chapter 24 Copyrights	 424
Understanding Copyright Law	424
Copying Music	426
Performing, Recording, and Arranging Copyrighted Works	428
Further Reading	431
 Chapter 25 Managing Sound Levels: Protecting Your Ears and Those of Your Students	 432
Further Reading	437
 Chapter 26 Special Topics: Leadership, Mentors, and Professional Development	 438
On Leadership—The Servant as Leader	438
Taking Over Smoothly from Your Predecessor	439
Mentoring Programs	440
Other New Teaching Induction Strategies	441
Teacher Evaluations	441
Further Reading	446
 Chapter 27 The Job Search and Interview	 447
Finding Job Openings	
Employment Profiles	
The Interview	
Questions to Ask the Interviewer	
The Interview Process	
Accepting an Offer	
Further Reading	
 <i>Appendix: The Rehearsal Toolkit</i>	
 <i>Bibliography</i>	 447
<i>Index</i>	459





Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

Foreword

Frank L. Battisti

Conductor Emeritus, New England Conservatory Wind Ensemble

Music and the arts are important! They encourage individuals to feel, think, and solve problems creatively, and to arrive at conclusions and answers in unique ways. Collaborative music-making experiences magnify the common denominators and diminish the differences between people—they bring them closer together. Music, like reading, math, and science, should be part of every young person's education and life.

Effective and inspiring music teachers combine a love of music with a passion for sharing it with others. Their love of music compels them to select and use music that is “truthful”—the real thing—not surrogate, mediocre, uninspired pseudo-music pieces. The performance of excellent-quality music offers the best means by which students can discover and feel the awesome power of music—to become “music lovers.”

The mission of the music teacher is to assist students in discovering music. In order to do this they must inspire, impart knowledge, teach skills, and guide students to an understanding and appreciation of music. Only if music is taught as “an art,” where students learn, create, and express in a unique manner (different than in other curricular subjects), can it be considered a necessary component in a student's education and development.

Evan Feldman, Ari Contzius, Mitchell Lutch, and Katarzyna (Kasia) Bugaj in their book, *Instrumental Music Education: Teaching with the Musical and Practical in Harmony*, examine factors involved in teaching instrumental music—specifically, practical musical and pedagogical knowledge and skills, a “sound-to-symbol” teaching system, basic musicianship training, selection of music, rehearsal and classroom procedures and management, student assessment and evaluation, administrative responsibilities, and personal and professional development of the teacher.

There are many fine publications about teaching instrumental music. However, none are as comprehensive as *Instrumental Music Education: Teaching with the Musical and Practical in Harmony*. All teachers, both young and experienced, will find this book very valuable.



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

Preface

One of the most bracing realizations many teachers have when entering the profession is that being a good musician does not automatically make one a good teacher. It's a prerequisite, to be sure, but ultimately the finest virtuoso in the world will fail in front of a large group of students if they don't know how to translate their expertise into effective teaching. For many teachers, even when they feel prepared—after they have studied child psychology, learned how to conduct, given recitals on their primary instrument, and learned how to play every other instrument—their first job rarely mirrors their expectations.

There is an irony to this, for once you combine the significant demands of a music degree with education classes and the training needed to teach multiple instruments, you create a music education degree bursting at the seams with requirements. We mean this not as an indictment of teacher preparation programs, but rather as recognition that music teaching (any teaching, for that matter) is a complex discipline. Not only is there much to learn, but there is a classic tension between theory and practice. After absorbing as much as we can as students, many of us enter the “real world” and find that some of the techniques and philosophies we practiced in school fit awkwardly into the realities of our new job.

Our intent in *Instrumental Music Education* has been to strike a balance among pedagogy and “in the trenches” practicality. Our approach is to show future educators what research and theory say they should do, and then provide the tools for how to do it. In some cases we present more than one perspective on the same issue, a way to recognize the hubris in insisting there is only one way to succeed, or that one viewpoint is inherently superior to another. Teaching the arts can only thrive with open-mindedness and introspection.

Our Teaching Philosophy

In many of the pedagogical sections of *Instrumental Music Education*, we emphasize the commonalities between music and spoken language. One of our impetuses for this was the gradual realization, through our own teaching, that the process of learning language reflects how students naturally learn music. Research shows compelling parallels between music and language—not only neural and cognitive ones, but also in conceptual and pedagogical ways. Put simply, the most effective way to learn music is the same way one learns to speak one's native tongue.

What are the implications of this conclusion for teaching music in schools? With spoken language, children achieve fluency in speaking and understanding before they even enroll in school. Formal schooling

then builds upon their fluency. It develops their ability to express themselves, increases their vocabulary, provides the structure of grammar and rules, and teaches reading and writing. In contrast, the conventional approach to instrumental music education teaches the same topics, but in reverse order. Most notably, reading (notation) and theory are taught first; everything else then follows, sometimes immediately, sometimes far behind.

By this process one teaches the symbol before one teaches what the symbol represents. As a broad example, we must avoid telling our students “a quarter note looks like this” before we know they can perform and understand a basic melody. It would be akin to teaching a toddler how to recognize and recite the alphabet before she has spoken her first word. In writing this book we were interested in a linguistic-influenced approach—a band/orchestra pedagogy that emphasized “speaking” and understanding music before “spelling” and notating it. Sound (and its meaning) is taught first, followed later by the symbol that represents the sound: sound-to-symbol. Much of the pedagogy we present is an adaptation and hybridization of educational theorists such as Suzuki, Kodály, and Gordon, among others. Beyond the recognition of music’s relationship with spoken language, their crucial insight was how to extract the tenets and mechanism of learning language, and then simulate and accelerate the process in the music classroom.

Features

Instrumental Music Education’s 27 chapters cover a wide variety of topics, beginning with the issues raised by sound-to-symbol philosophies. These pedagogical topics include:

- A discussion of the connection between music and language, with an eye toward showing how this affects the teaching of music fundamentals.
- An introduction to some of the pioneers of sound-to-symbol, including Kodály, Suzuki, Dalcroze, Orff, and Gordon.
- A template for teaching rhythm, tonality, and reading with comprehension to beginning instrumental students.
- Suggestions for applying these ideas to a traditional method book.
- Strategies for teaching improvisation and composition in the instrumental classroom.

We also include a section on classroom management, one of the most difficult subjects to master for any teacher, not least because experienced master teachers often make it look effortless. Yet though experience may be the best teacher, having a plan accelerates the learning process. One of our goals in writing this text was to provide teachers the concrete theory and tools with which to prepare themselves, especially since it’s difficult to simulate a public school scenario in a college classroom or during student teaching and other in-the-field internships. We discuss a variety of philosophies and techniques, and we encourage every teacher to be thoughtful in their approach to disciplining and managing students in the same way they would be choosing repertoire and teaching musicianship.

Of course, being a music teacher involves much more than just teaching music and managing a classroom. Students must be recruited, programs advocated for, funds raised, budgets balanced, concerts managed, repertoire chosen, scores learned, parents communicated with, new jobs sought, and new skills attained. Often these skills are learned on the job, and indeed our text cannot replace years of first-hand experience. Still, we have tried to provide detailed primers for some of these crucial activities.

New to This Edition

- A new chapter on teaching beginning band using sound-to-symbol pedagogies.
- Expanded coverage for strings and orchestra, including a new chapter on teaching beginning strings.
- A new chapter on conducting technique.
- Expanded material on teaching students with disabilities.
- Concert etiquette and the concert experience.
- Expanded coverage on the science of learning, including the Dunning–Kruger effect and the effective use of repetition in rehearsal.
- Techniques for improving students’ practice habits.

Organization

Instrumental Music Education is divided into three units:

Unit 1: The Process of Teaching Instrumental Music—includes: An Introduction to Sound-to-Symbol; Teaching Rhythm and Rhythm Reading; Tonality, Melody, and Singing; Teaching Improvisation and Composition; The History of Instrumental Music Education and Its Philosophy; and Constructivism, Concept Attainment, and Direct Instruction.

Unit 2: Directing Bands and Orchestras—includes: Classroom Management; Curriculum, Assessment, and Grading; Repertoire; Score Study; On Conducting Technique; Large Ensemble Set-Up; Rehearsals (in three parts); Inclusion—Instrumental Music for Students with Special Needs; Intonation; and Directing Other Ensembles; Recruiting, Organizing, and Starting the Band and Orchestra; Sound-to-Symbol in the Beginning Instrumental Classroom; and String Pedagogy for Non-String Players.

Unit 3: Administrative Issues—includes: Planning and Managing a Concert/Concert Etiquette; Fundraising, Promotion, and Advocacy; Communication; The Music Budget; Copyrights; Managing Sound Levels; Leadership, Mentors, and Professional Development; and The Job Search and Interview.

A set of questions serve as the bookends for the beginning and end of each chapter. The introductory “To Guide Your Reading” questions quickly preview the goals of the chapter. The “Activities/Assignments for Further Exploration” offer suggestions for class assignments, discussion, and individual projects.

Multimedia Features www.routledge.com/cw/Feldman

Instrumental Music Education provides robust multimedia materials, which include numerous teaching and learning tools for instructor and student.

The companion website has several special features:

- Instructional videos filmed with high school, college, and community concert bands. The instructional videos were born from our frustration with the inevitable disconnect between reading about a technique and trying to imagine how it would work in real life. Having a description in prose is important, but we knew we could write at great length and still never achieve the clarity of a four-minute video on the same subject. We have provided various methods for addressing musical issues that arise in rehearsal, though we also feel it is important to develop variations, extensions, and additions for these methods.
- Over 100 pedagogy videos for instruments, performed by professional players and teachers.

- More than 220 rhythm flashcards, plus letters and forms discussed in the text.
- 50 tracks of acoustically pure drones and demonstration exercises for use in rehearsals, sectionals, and lessons.
- Additional topics on “The Job Search and Interview” and “The Rehearsal Toolkit,” which include “How to Practice,” presented by Dr. Lynn Hileman (West Virginia University) and “Rhythmic Alteration and Practice Planning,” presented by Matthew McClure (University of North Carolina at Chapel Hill).
- Look for the companion website icon throughout the text:



The process of writing this text remains an incredibly rewarding experience. Our dear colleague Professor Daniel Huff summarizes the importance of what we all do: “We approach music and education as being an intrinsic part of a basic human need to create or pass along the culture we share; as being part of a community of practitioners who believe that music-making and teaching includes acquiring personal skills and experiences making music, as well as a deep understanding of how and why people in different places and times express their world view through music.”

Best wishes, musically and otherwise,

Evan Feldman
Raleigh, NC

Ari Contzius
Wallkill, NY

Mitchell Lutch
Greeley, CO

Katarzyna (Kasia) Bugaj
Tallahassee, FL

May, 2020

Acknowledgements

The authors are indebted to a long list of colleagues, friends, and family, all of whom made it possible to complete this text. Among them:

- Leah Zullig and Mary Delaney, for being the reasons I love coming home after a long day at school.
The entire Feldman and Zullig families—for showing me how to be professional, good-natured, loving, and passionate—all at the same time.
Ashley, Cole, and Leia Contzius—for their endless support, patience, and unconditional love throughout the writing of this textbook.
Martin & Janet Contzius, Gail Waimon & Lenny Friedman, and Dawn & Rudy Michlewski—for their love and support throughout the writing of this textbook.
Lenore Aldi-Snow, for her passion and generosity in sharing her expertise with sound-to-symbol.
To my family, the Lutch clan—for all their support, encouragement, and love.
To our students, past and present—for the privilege to both teach and learn from them.
Lynn Hileman—Assistant Professor of Bassoon and Music Theory, West Virginia University—for her peerless writing and editing abilities, vast experience with the philosophies of Renee Longy and Marianne Ploger, and consistent insight into the musical and pedagogical issues covered in this text. Her influence appears, overtly and subtly, in nearly every chapter. We are especially indebted to her for allowing us to use her original worksheets regarding melodic patterns, enrhythmic patterns, and subdivision.
Karey Sitzler—Orchestra Director, Lakeland High and Forest Glen Middle Schools; Conductor, String Orchestras, Williamsburg Youth Orchestra; Adjunct Professor, Paul D. Camp Community College—for the invaluable contributions generated by her passionate teaching, effervescent creativity, and years of experience, especially in the area of string and orchestra pedagogy.
Daniel Huff—Clinical Associate Professor of Music Education, University of North Carolina-Chapel Hill—for his assistance in defining major pedagogical issues and refining the text's approach to them, all enhanced by his ability to look at a problem from multiple perspectives.
Amy Noll (retired)—Director of Orchestras, Hicksville High School, NY—for over ten years of unflinching support and relentless excitement for playing and teaching strings.
Michelle Di Pasquale—Band Director, Washingtonville Central School District—for sharing her detailed approach on the art of elementary recruiting.

Adam Fontana—for his generous contributions.

Julie Carr—for allowing us to include her portfolio system.

Renato Pinto—for his support without which I could not do what I do.

Staś and Helen Bugaj-Pinto—for their sincere attempts at patience, their boundless joy and energy, and their ability to keep their parents on their toes.

Unit 1

The Process of Teaching Instrumental Music



Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

Chapter 1

An Introduction to Sound-to-Symbol

To Guide Your Reading

What is “sound-to-symbol” and how does it differ from other teaching approaches used in the music classroom?

What connections are there between music and language?

Why are these connections important when considering an approach to teaching music?

How does treating music as a language affect the way we teach it?

What are the fundamental principles of Suzuki, Kodály, Orff, and Gordon?

In what ways can competing sound-to-symbol theories co-exist and support each other in the classroom?

What are the common questions, confusions, and misconceptions people have concerning these teaching approaches?

How can sound-to-symbol principles be integrated with non-sound-to-symbol curriculums and method texts?

Consider the structure of many beginning instrumental music programs: After students choose their instrument, the first lessons cover how to hold it, how to shape an embouchure, where to place the fingers, how to produce an initial tone, how to read simple rhythms, how to hold a bow, and how to apply correct fingerings. Students are shown a whole note, told it contains four quarter notes and gets four beats, and are then asked to play that note, usually on the easiest tone to produce. More rhythms and notes are introduced until students are prepared for simple melodies, which they read using their newly learned knowledge about notation and fingerings.

Conservatories and professional orchestras are filled with exceptional musicians who are products of this system. Nevertheless, traditional method books may not reflect the way people naturally learn music, which many educational theorists argue parallels language learning. This is a process that begins with learning to speak and only then moves on to learning to read. This is often called “sound-to-symbol,” or “sound before sign,” because it emphasizes aural recognition and understanding as precursors to theoretical knowledge and reading skills.

As we will see in Chapter 5, sound-to-symbol is not a new concept. Johann Heinrich Pestalozzi (1746–1827), the Swiss educational reformer, Hans Georg Nägeli (1773–1836), Pestalozzi’s disciple, Sarah Ann Glover (1785–1867), the first developer of the sol-fa system, and John Curwen (1816–1880), the English minister who refined it, all advocated similar philosophies. Yet somehow, at least in American public school instrumental music education, it remains on the periphery.

In the twentieth and twenty-first centuries, at least five music education philosophies reflect the sound-to-symbol approach: Kodály, Suzuki, Orff, Gordon’s Music Learning Theory, and Dalcroze Eurhythmics (which will be discussed in detail in Chapter 2). These music philosophies rely on three basic assumptions, all of which are connected in some way to spoken language:

1. Nearly everybody acquires the ability to speak without the benefit of formal training.
2. The processes of acquiring language and music parallel each other in key ways.
3. One of the most important steps in learning language or music is experiencing it and doing it.

The Connection between Language and Music

Despite Henry Wadsworth Longfellow’s observation that it is the universal language, music is not technically classified as one. But perhaps it does not have to be a language in order to act like one. This is why sound-to-symbol philosophies assume a strong connection between language and music. This is common sense to many musicians, and the fields of linguistics, cognitive evolutionary science, and neuroscience are finding increasing evidence to support the connection.

Famed linguist Noam Chomsky was inspired by children’s innate ability to learn complex linguistic skills on their own, a process he called “linguistic competence.”¹ Marveling over their ability to produce grammatically correct sentences they had never before heard, he postulated that all children are born with “formal universals”—genetically encoded rules that operate in all languages.²

Leonard Bernstein seized upon this idea and makes a case for a musical version of it in his 1973 lecture series at Harvard, *The Unanswered Question*. In searching for a musical grammar that explains how we innately hear music, Bernstein painstakingly applies Chomsky’s grammatical rules to musical analogues, a process he admits is only “quasi-scientific.”³

Bernstein’s Musical–Linguistic Analogues

musical motive ⇒ noun

chord or harmony ⇒ adjective

rhythm ⇒ verb

Though they break down if we dig too deeply, Bernstein’s analogies are food for thought as we work to establish a meaningful language–music connection. Fortunately, cognitive evolutionary research and brain research pick up the argument where poetic reasoning leaves off. Although the brain’s music and language systems seem to operate independently, they share neurobiological origins in the same regions.⁴ This helps explain how music shares several features with speech. Among them:

1. A set of grammatical and syntactical rules that govern a hierarchy of how structures (words, notes, etc.) are ordered and arranged.
2. Memorized “representations”—In the case of language, these representations are words and their meanings; in the case of music, these representations are melodies.

Music and language share important brain processes that interpret rhythmic structure.⁵ For example, both music and speech group sound into patterns called phrases. There is also evidence of overlap in how the brain processes the boundaries between phrases.⁶

A study published in the *Journal of Neuroscience*, by Dr. Nina Kraus, showed not only that rhythm is related to language, but also that rhythm skills developed through music lead to strong language skills. Dr. Kraus measured how well a group of 100 teenagers were able to tap their fingers to a beat. She found that musically trained subjects who were best able to tap the pulse also showed enhanced neural response to language. According to Kraus, “It turns out that kids who are poor readers have a lot of difficulty doing this motor task and following the beat. In both speech and music, rhythm provides a temporal map with signposts to the most likely locations of meaningful input.”⁷

As described by Aniruddh D. Patel in his book, *Music, Language, and the Brain*, the brain also seems to process melodic contours in music and language in a similar way.⁸ If we examine the makeup of those contours closely, we find that both music and language share a predominance of small intervals between pitches,⁹ something that could be explained by the physiological limitations of the human voice. But studies by Patel, Iversen, and Rosenberg (2006) reveal characteristics in the music of countries that reflect the tonal patterns of those countries’ languages.¹⁰ The study found that English speech patterns appear in English music and French speech patterns appear in French music¹¹—and these are differences that cannot be explained by physical characteristics of the French and English people. One explanation could be that composers regularly borrow text from their native language, and the text’s patterns naturally find their way into their music (i.e., folk music). But Patel rejects this, pointing out that speech is reflected in many musical works that are not connected to folk music. Instead, he suggests that the connection could be more direct, that “implicit learning of prosodic patterns in one domain (ordinary speech) influences the creation of rhythmic and tonal patterns in another domain (instrumental art music).”¹²

What about grammar and syntax? With language, rules and memory are controlled by different parts of the brain.¹³ Recently, neuroscientists Robbin A. Miranda and Michael T. Ullman discovered that musical rules (defined as notes that stay properly within a given tonality) and memory show the same dichotomy. They found that memory for words and melodies share one part of the brain, and rules for language and music share another.¹⁴

Cognitive scientist Steven Pinker would probably dismiss these as happy coincidences. He famously dismissed music as “auditory cheesecake”¹⁵—something that developed without any clear evolutionary basis. Music, he argued, was a “spandrel,” a byproduct of other evolutionary forces. It just happened to exploit pleasure channels that likely developed to reinforce linguistic communication. Pinker writes:

As far as biological cause and effect are concerned music is useless. It shows no signs of design for attaining a goal such as long life, grandchildren, or accurate perception and prediction of the world. Compared with language, vision, social reasoning, and physical know-how, music could vanish from our species and the rest of our lifestyle would be virtually unchanged.¹⁶

But Pinker’s assessment has been disputed. Even if Pinker’s evolutionary history is correct, the relationship between music and language is evidently hardwired. Further, some argue that rather than being a byproduct of language, music actually helps prepare the mind for cognitive and social activities. Neuroscientist Daniel Levitin writes:

The fact that music lacks specific referents makes it a safe symbol system for expressing mood and feelings in a non-confrontational manner. Music processing helps infants to prepare for language; it may pave the way to linguistic prosody, even before the child’s developing brain is ready to process phonetics. Music for the developing brain is a form of play, an exercise that invokes higher-level

integrative processes that nurture exploratory competence, preparing the child to eventually explore generative language development through babbling, and ultimately more complex linguistic and paralinguistic productions.¹⁷

A child's first exposure to spoken language comes from all around them—from their parents, siblings, television, radio, stories that are read to them, and more. A baby utters her first words even though no one formally taught her how to say anything. The child simply imitates something she has already heard. She experiences it and then does it herself. Soon she associates these sounds with specific objects and people. “Dada” becomes a way to reference the father, “Mama” refers to the mother, and so on. The child communicates with her limited vocabulary, eventually combining words into phrases and sentences. Using the building blocks of vocabulary and phrases acquired from her parents, she soon speaks sentences she has never heard before. The child also extracts rules from what she has acquired and applies them to new sentences and additional vocabulary. After spoken language acquisition, the child begins to associate words with printed symbols, enabling reading and writing.

The memory children use to acquire vocabulary is powerful. In their first ten years children learn to recognize and understand an average of 2,000 words a year (over five each day).¹⁸ What makes this memorization possible is context. Children learn words by relating sounds to their meaning. As noted reading theorist Frank Smith writes, “Only nonsense is difficult to memorize.”¹⁹

Notice what is absent from this process: Parents do not teach their children to read and say the alphabet in order to speak. Imagine a mother exhorting her child: “This is a ‘b.’ Say ‘buh!’” OR “Say ‘c’ with a soft sound. Now with a ‘k’ sound!”

Surely it would be ridiculous to expect a toddler to learn how to read and write before he learns how to speak! Yet this is exactly how most music method books teach. Students learn to read notation before they can “speak” music through simple melodies, and they learn the musical alphabet (i.e., individual notes and scales) before they learn musical words and sentences (i.e., melodies and phrases). This effectively teaches students to read music before they understand what they are reading.

Emphasizing musical words rather than letters (individual notes) has advantages from a reading point of view, too, for there is a limit to how much the brain can absorb at one time. In written language the limit is four or five random characters per second, which hardly seems sufficient for reading until one realizes we rarely read random individual letters.²⁰ Rather, we read words comprising letters. And words are not usually grouped randomly, either. For example, in “Boys peanut crowded skim,” each word is easy to read, but the entire phrase takes time to absorb because the words are unrelated. “Boys eat peanuts quickly” has the same number of words, but is easy to comprehend because it makes sense—there is a context for each word.

Music works the same way:

- Notes are grouped into words, i.e. rhythmic and melodic patterns.
- Words are grouped into sentences with grammatical structure and context: Rhythm words are given meaning by pulse and meter; melodic words are given meaning through tonality and harmonic function.

Though this analogy may be apt, it is incomplete. Music teacher Eric Bluestine observes there is an extra step in learning music: “Children build a language vocabulary by associating words with things that they see, hear, touch, taste, and smell. On the other hand, children build a music vocabulary by hearing patterns, then singing or chanting them—and then naming them.”²¹ The extra step of naming is one of the keys to the Kodály, Suzuki, Orff, and Gordon approaches to teaching music.

For John M. Feierabend, a well-known advocate and teacher of sound-to-symbol, music literacy (i.e., music notation) should not be taught until students can show the following readiness skills:²²

1. Comfortable and accurate singing skills (Tuneful).
2. Comfortable and accurate moving skills with the beat in metrical groupings of 2 and 3 (Beatful).
3. Expressive sensitivity (Artful).

Feierabend calls this being tuneful, beatful, and artful. He stops short of saying students must be musically fluent before learning notation, but he does suggest that “conversational” skills with rhythm and solfege syllables should precede the introduction of notation. The sound-to-symbol approach of this textbook echoes this. We believe students should be able to sing and move before they play their instruments and read, but that it is reasonable for there to be parallel streams of learning. In other words, the orchestra class might be reading and playing quarter notes D-Major while they are still learning to be conversational (i.e., no notation yet) on eighth notes in G-Major. Bottom line: experience the music via singing and moving, audiate the sounds, and then converse before using decoding skills to read the notation. And, as Feierabend suggests, always do so musically. It’s simply not enough to sing or play the correct notes and rhythms unless it is done with expression, intention, and beauty.

Though an exhaustive discussion is beyond the scope of this text, the sections below present an introduction to each of these three approaches. In later chapters we present a more in-depth discussion of how to use sound-to-symbol teaching in the classroom.

An Introduction to Kodály

Zoltán Kodály’s philosophy of music education grew out of a study of Hungarian folk music that he undertook in 1905, when he began collecting and analyzing samples of traditional music. Examples of these soon appeared in Kodály’s own compositions—from the direct quotations in his folk song arrangements with piano and children’s choral music—to the harmonies language and style that infused his instrumental music.

Authentic, high-quality folk music is central to Kodály’s philosophy. After studying their linguistic forms, he realized that the entire tradition of Hungarian peasant music was in danger of becoming forgotten amidst urbanization. He believed music education was a way to protect the long-term survival of the Hungarian musical tongue and provide a gateway into other music traditions. As the noted Kodály educators Houlahan and Tacka write, “When children gain knowledge of different musical repertoires beginning with music of their own community and expanding to include music of other communities as well as art music they are in a position to become stewards of their cultural legacy.”²³

Kodály also believed folk music supports the physical, developmental, and psychological needs of children. For over forty years he worked with other researchers and educators to develop a system for Hungary’s teachers. Since then teachers in many countries, including the United States, have adapted these ideas to fit their own culture.²⁴

The classic principles that tie Kodály to the sound-to-symbol approach include the following:

- Experience comes before notation.
- Students should be grounded in the folk music of their culture.
- Melodic and rhythmic patterns are employed to teach the musical language that appears in folk music.
- Singing games and movement exercises aid musical development.

Kodály was adamant about the importance of sound-to-symbol. “We should not allow anyone even to go near an instrument until he or she can read and sing correctly. This is our only hope that one day our musicians will be able to “sing” on their instruments.”²⁵

Other principles of Kodály include:

- Use only the highest quality music.
- Music belongs to everyone, not just the elite.
- Musical experiences should begin in early childhood.
- Children should regularly listen to music and engage in activities that make connections between folk music and art music.
- A cappella singing is the foundation of any music learning, even instrumental.
- Literacy is the primary means for musical independence.
- Use of relative solfege syllables.
- Use of rhythm syllables. (Unlike the solfege syllables, the original Kodály rhythm syllables are not relative; instead, each syllable refers to a specific notational duration. For example, “tah” refers to a quarter note. Today, some Kodály teachers use syllables that adapt to the beat pulse, no matter how it is notated. Chapter 2 contains a more thorough discussion of these variations.)
- A child-centered learning sequence.²⁶

An Introduction to Orff’s Schulwerk

As with most of the philosophies outlined in this chapter, Schulwerk introduces music to children in a way that is holistic and natural, and reflects how they learn language. The principles of Schulwerk (in German, “school work” or “schooling”) were created by Carl Orff (1895–1982) in the 1920s with Dorothee Günther at the Güntherschule, in Munich. The Güntherschule, which was established for music, dance, art, and theater students to integrate their craft, became a testing ground for Orff’s ideas—musicians were encouraged to improve their dance skills, and dancers worked to develop their musicianship. Schulwerk employs what Orff called “elemental” music-making, meaning that instruments, songs, and activities are simple, natural, and close to a child’s sense of play and imagination.²⁷ Orff and Günther believed that children would better learn new concepts—music, in this case—if they felt comfortable in their environment. Schulwerk is widely used today in elementary schools and with mentally and physically handicapped children, though its ideas apply to any group.

Schulwerk’s approach emphasizes active music-making and improvising, using singing, instruments, speech, drama, and movement. By emphasizing group activities, it develops cooperation, confidence, and social learning.²⁸ Orff’s pedagogical approach has been adapted across the world, each adaptation incorporating indigenous chants, games, songs, folk songs, and proverbs to make the experience authentic. Again, it is important to note that Orff’s Schulwerk is about performing music in a community, expressing one-self, and working with others, and less about developing technical proficiency on an instrument.

Orff considered percussive rhythm to be a natural form of expression, and thus a key to unlocking each child’s expressive potential. Ostinati are used to imitate, improvise, and express harmony. Rhythmic chants, from speech patterns, are also played on body percussion and small idiophones, such as xylophones, marimbas, glockenspiels, and metallophones. These instruments project well, are easily moved, and naturally incorporate movement into their playing.

Melodies are built from the pentatonic scale, beginning with a 5-3 melodic kernel, which is then expanded to include the sixth scale degree (e.g., $\hat{5} - \hat{6} - \hat{5} - \hat{3}$). Eventually, scale degrees $\hat{1} - \hat{2}$ complete the pentatonic scale, followed by $\hat{4}$ and $\hat{7}$ to complete the diatonic scale.

Performance skills begin with spontaneous exploration and progress through imitation, guided exploration, improvisation, and composition. Orff is explicit about encouraging rote learning and imitation as a way of getting students to make music. In Orff, as in Suzuki and Gordon, students later learn literacy, note-reading, and solfege, though Orff's methods do not prescribe any particular approach to doing so.

An Introduction to Suzuki

Though he did not use the term “sound-to-symbol,” Shin'ichi Suzuki nevertheless championed a system of music education that embodies many of its principles. After developing his philosophies in 1940s Japan and introducing them to the United States in the 1950s and 1960s, Suzuki's method became synonymous with private string music education. Yet it made few inroads into most American public school music classrooms.

Trained as a classical violinist, Suzuki believed music education should parallel language acquisition. Indeed, he called his method the “Mother Tongue Approach.”²⁹ The impetus for his ideas was a Chomsky-like observation: that young children learn to comprehend and speak complex languages without formal training. Suzuki observed that nobody corrects the grammar of a toddler's first sentences; nobody restricts what a toddler first utters to conform to a preset curriculum; nobody asks a toddler to practice speaking on his own; and nobody expects a toddler to write and read before he can talk. Instead, Suzuki believed parents should encourage their child's ability to speak, and do so without judging.

Suzuki believed the same lessons should apply to teaching music. Initially, he used his ideas only with violin, but they are transferable to every instrument. Called “Talent Education,” the basic tenets of his philosophy include:

1. Begin music study early: Suzuki suggests children should begin playing violin at age three, but says they should start listening to recordings and other performers even earlier.
2. Listen regularly and often to the music that is being studied and will be studied. Suzuki firmly believed that listening is an essential part of acquiring language and music skill.
3. Take lessons, and have parents directly involved with daily practicing—guiding, encouraging, and even playing. In the same way that students still use their first words even when practicing advanced ones, Suzuki believed students should keep practicing their first pieces even when they have progressed to more difficult literature.
4. Everything the child plays should be memorized, and no notation should be introduced for up to three years. Again, Suzuki sets up an analogy to language acquisition: Children do not learn to read or write until many years after they have begun speaking and understanding. Everything a child says is memorized!
5. Learning notation is a process of association: A child should first see the written music after the piece has been memorized, and at that point will begin to associate the sound with its notation.³⁰

Suzuki was a pioneer in recognizing and encouraging children's innate musical abilities. More recently, a growing body of research pioneered by Edwin Gordon in the 1980s expanded upon his ideas and linked “Talent Education” to contemporary educational psychology.

An Introduction to Music Learning Theory

Sound itself is not music. Sound becomes music through audiation, when as listening in language you translate sounds in your mind and give them meaning.³¹

If Suzuki is the philosopher of sound-to-symbol instruction, concerned as much with children's personal development as he is their musical development, and Kodály is the historically minded sociologist, dedicated to children's musical and psychological development through the preservation of their ancestors' musical traditions, then Edwin Gordon is the scientist. His approach is based on his own extensive research on how American children learn. In his seminal work, *Learning Sequences in Music*, Gordon outlines the stages through which children progress when they learn music. Like Suzuki, Gordon emphasizes that the ability to read is not the same as the ability to comprehend.³²

Gordon proposes a musical counterpart to language comprehension: *audiation*. Audiation takes place when we assimilate and comprehend in our mind music that we have just heard or have heard performed in the past. Audiation also takes place when we assimilate and comprehend in our mind's ear music that we may or may not have heard but are reading in notation or are composing or improvising.³³

As the quote at the beginning of this section suggests, Gordon stresses the importance of audiation and comprehension over just reading (or "decoding"). His research, along with work by Richard Grunow and Christopher Azzara, has been influential in showing how traditional teaching does not reflect how children learn music. Gordon writes:

We audiate music and we read and write notation. Unless we can audiate what we read and write in notation, we cannot give musical meaning to notation. We are "faking" as we are reading notation. If we cannot audiate, at best all we can do is try to decode notation. Reading notation should not be an act of decoding, it should be an act of audiation. For many young pianists who cannot audiate, for example, the piano keyboard represents nothing musical. The keys become another set of musically meaningless symbols which activate the decoding process. Without audiation, notation can reveal little. Notation is intended only to assist us in recalling in audiation what we have already perceived and audiated.³⁴

Here is a linguistic analogy: An English speaker can read Spanish by sounding out the words but will still have no idea what the words mean—i.e., he will not audiate their meaning. For Gordon, audiation is a fundamental skill students must have before learning "executive skills" (e.g., embouchure, bow hold, fingerings, articulations) and theory (e.g., reading printed note names and rhythmic patterns).³⁵

Gordon describes two types of learning: *discrimination* and *inference*. Discrimination learning is the ability to "discriminate among pitches and durations"³⁶—not simply individual notes, but tonal (melodic) and rhythmic (durational) patterns. In discrimination learning students are aware they are being taught but do not fully understand what they are learning. Imitation is a crucial component. Inference learning usually begins later, when students essentially teach themselves. They use their vocabulary from discrimination learning to understand—or infer—the meaning of unfamiliar tonal and rhythmic patterns.³⁷

Echoing Suzuki's method, but breaking the process down into more detail, Gordon proposes five stages of learning:

Aural/Oral—Students learn to recognize a pattern by hearing it (aural) and performing it (oral). Teacher presents (sing and play) patterns to students, who repeat those patterns (sing and play).

Verbal Association—Students connect the sound patterns they learned in the aural/oral stage with syllables, essentially naming the patterns to give them external meaning. Teacher presents the same patterns as before, but now with syllables. Students repeat the patterns with the syllables.

Partial Synthesis—Students connect sounds with their syntax and meaning and begin to hear individual patterns as part of a meaningful series. At this stage the goal is not for students to recognize the individual patterns themselves, but rather to recognize the tonality and meter of patterns when they are grouped together. By doing so, students demonstrate they understand the musical meaning of these patterns in tonal and rhythmic contexts.

Symbolic Association—Students associate sounds and syllables with visual symbols (notation). Teacher presents the previous patterns and syllables along with the corresponding notation. Students do not read, but rather learn to associate a symbol with what they are already performing.

Composite Synthesis—Students audiate tonality and meter at the same time they read or write a series of tonal and rhythmic patterns. Teacher presents the notation of familiar patterns, with and without syllables. Students read and perform these patterns without the syllables (i.e., sing, then play).³⁸

Sequence is crucial in Music Learning Theory. For example, if a student has not mastered aural/oral for a specific pattern or concept, he should not progress to verbal association using that pattern. However, students can be at different stages for different patterns. They might be symbolically associating some patterns while learning a new batch in the aural/oral stage.

To some, Music Learning Theory is inflexible in its strict sequencing. In practice it is easily combined with other philosophies and adapted for classroom teaching.

A Contemporary Approach to Kodály

Recently, Micheál Houlahan and Philip Tacka re-examined Kodály's traditional teaching in the context of educational psychology and learning models. They took contemporary research questions (i.e., What teaching sequence best reflects the way people naturally learn music?) and combined it with the well-developed curriculum of traditional Kodály. Their model includes three phases: cognitive, associative, and assimilative.

Cognitive Phase

This is based on research and gestalt principles that show students initially perceive music in patterns rather than individual notes. The cognitive phase involves teaching songs that contain essential melodic and rhythmic patterns. These patterns are later extracted and used as the basis for singing other songs and learning more complex patterns.³⁹ Repetition, performance without notation, and movement activities strengthen musical memory and prepare for literacy. Houlahan and Tacka⁴⁰ also suggest some of the following kinesthetic activities:

1. Conduct while singing.
2. Clap or pat the pattern while performing it.
3. Perform a song while pointing to an image of the rhythm.
4. Clap the rhythm while singing in the "inner ear."
5. Perform a song while pointing to an image of its melodic contour.
6. Use hand motions to show the direction of a melodic line.

The next step is to use questions to develop students' aural awareness about the songs and patterns they learn.⁴¹

1. On which beats does the target rhythm appear?
2. How many articulations appear on beat 3?
3. Where is the highest part of the phrase?
4. On which beats does the target melody occur?

Next, introduce a visual element, though not through traditional notation. Students write personal representations of the sounds they hear and perform. This allows teachers to gauge by the class understanding of the material and gives students time to make connections between what they hear and what it looks like.⁴² For example:

1. Write the rhythm using rhythm syllables.
2. Write a visual representation using horizontal lines, vertical lines, and shapes; encourage students to develop a personal system that accounts for pulse, duration, and the number of sounds per beat (e.g., eighth notes = 2, sixteenth notes = 4).
3. Write the solfege symbols for a melodic pattern.
4. Write a visual graph of the duration and contour of each note in a melody.⁴³

For beginners, these activities precede regular notation. Students are taught patterns using rhythmic and solfege syllables, and eventually they recognize the patterns in familiar songs without the syllables. The three-pronged approach recognizes there are different types of learners in the classroom: Kinesthetic, aural, visual, and mixed.⁴⁴

Associative Phase

In this phase the teacher guides students to associate the pattern with its rhythm or solfege syllables, and then with its regular notation.

Assimilative Phase

The final phase is separated into three stages:

1. Students aurally and visually recognize the new pattern in familiar and new contexts.
2. Students practice the new pattern with old ones.
3. The instructor assesses understanding of the new pattern.⁴⁵

In many ways Gordon's Music Learning Theory and Houlahan/Tacka/Kodály are kindred spirits, as they share a Pestalozzian sound-to-symbol heritage. There are notable differences, however. For example, Gordon and Kodály use rhythm syllables that reflect conflicting philosophies about the structure of rhythm (to be discussed in Chapter 2). Music Learning Theory and Kodály also emphasize different melodic patterns (though both use examples that are easy to sing and have no semitones). Music Learning Theory's patterns revolve around primary harmonies. Gordon bases this on research that suggests children learn pitches in relation to tonality and syntax. As noted educator Eric Bluestine puts it, students audiate syntax rather than phonology.⁴⁶

The Kodály system is less concerned with tonality and harmony. Instead, it employs pentatonic patterns of the kind found in folk music, the idea being that these patterns are easy to sing and are the building blocks of children's music from around the globe. Kodály would teach do-mi-sol-la-sol, while Music Learning Theory would avoid the mixture of mi, sol, and la (at least initially) because it implies both tonic and subdominant harmony. Kodály himself writes:

Nowadays it is no longer necessary to explain why it is better to start teaching music through the pentatonic tunes: First, it is easier to sing in tune without having to use semitones, second, the musical thinking and the ability to sound the notes can develop better using tunes which employ leaps rather than stepwise tunes based on the diatonic scale often used by the teacher.⁴⁷

For Kodály, pentatony is the key to many world musics, from ancient Gregorian chant to Chinese folk music to Debussy.⁴⁸

Kodály and Gordon also have different perspectives about when to introduce notation. Kodály introduces it systematically as students learn patterns and develop their ears, in the firm belief that reading and writing music are absolutely central to music literacy. Music Learning Theory, on the other hand, holds that notation should initially be used in the same way we use written language with children who cannot read. Just as a child follows along with the pictures and text of a bedtime story, a student could watch sheet music while they echo the teacher's singing.

Eclecticism and Hybridization

All three philosophies emphasize singing before playing, a structured learning sequence, the use of pitch and rhythm syllables as a precursor to notation, the introduction of notation after students are comfortable performing patterns and songs, and the development of the mind's ear (Gordon calls it audiation; Kodály calls it inner hearing). Kodály and Gordon also share a belief of the importance of learning to sing melodies, whether it be folk music (for Kodály) or well-known tunes (for Gordon). Indeed, in the big picture, Suzuki, Kodály, and Gordon agree more than they disagree. As John M. Feierabend, Professor of Music at the Hartt School of Music, writes, "Whether a teacher attempts a thorough integration or adapts only the learning sequence activity aspects of Music Learning Theory into a Kodály approach, the students will benefit."⁴⁹ Moreover, though Music Learning Theory is often considered a rigid teaching method, in reality it is a tightly structured teaching theory. The method is a flexible reflection of that theory. Eric Bluestine observes, "Since there's no one right way to design a method based on Music Learning Theory, a music curriculum may take one of many possible forms. One can, for instance, write a music curriculum that combines Music Learning Theory with Orff and Kodály activities."⁵⁰

In *The Eclectic Curriculum in American Music Education*, Polly Carder writes that American music educators have long borrowed from diverse sources:

From Lowell Mason's course of musical instruction based on theories of Pestalozzi (who in turn had been influenced by Rousseau), to the present complex music curriculums in schools and universities, Americans have seen fit to adopt or adapt and develop any useful educational concept . . . The basic ideas on which successful teaching methods are built seldom are entirely new, nor do good ideas, as a rule, come to only one person . . . The fact that an idea has recurred again and again in educational practice indicates that it is worthy of our consideration. New and different approaches to persistent problems may result from creative application of an old idea.⁵¹

El Sistema

Unlike the other topics in this chapter, El Sistema is a movement and a program. It does not necessarily prescribe a particular sequence of teaching or a model for how children learn. Rather, it heralds the power of learning music and playing in a large ensemble as a force for social change. El Sistema was founded by José Antonio Abreu in Venezuela in 1975 as an antidote to poverty and violence. Western classical music was not particularly well-developed in Venezuelan education at the time, but Abreu began with 15 students studying in his garage and developed it into a national, government-funded system that targets socially and economically disadvantaged students.⁵²

El Sistema programs are built around a local “*nucleo*,” or music center, that serves as a safe haven for developing friendships, self-esteem, artistic talent, and citizens who are responsible, contributing, and happy.⁵³ Orchestras are the core of every *nucleo*, and students participate in a developmentally appropriate large ensemble as soon as possible. Peer instruction and group learning is heavily emphasized to develop ownership and community. Younger students begin with movement and expression, learn recorder or percussion by age 5, and choose a wind or string instrument by age 7.⁵⁴

Venezuela has a national music curriculum, but local *nucleos* are free to adapt it to their needs. Repertoire is a mixture of Western classical masterworks, Latin American classical pieces, and Venezuelan folk music.⁵⁵ Students often revisit pieces multiple times in their careers (albeit in more difficult versions as their skill improves). Rehearsals are intense and extensive, with sectionals bolstering the goal of perfecting orchestral parts. Older students typically lead sectionals and teach private lessons to younger students.⁵⁶

El Sistema sessions include private lessons and sectionals, but the emphasis is on large group rehearsal and performance. Students are expected to spend several hours at the *nucleo* nearly every day of the week. El Sistema’s philosophy calls for frequent performance, even starting at an early age.⁵⁷ Parents are taught how to support learning, and some even participate in parent musical ensembles. Many El Sistema teachers and leaders are graduates, increasing the sense of ownership and community.

Today in Venezuela, over 500,000 children participate free of charge, some as young as 2 years old. Gustavo Dudamel, Music Director of the Los Angeles Philharmonic, is a celebrated graduate of El Sistema and one of its most passionate advocates in Venezuela and the United States.

Modeling

Modeling—when a teacher demonstrates a desired behavior or skill—is a well-established technique that studies have repeatedly shown to be effective.⁵⁸ Although the cognitive processes in play vary, modeling appears in social contexts (e.g., how parents teach children to behave and speak) and academic settings (e.g., how science teachers demonstrate a lab experiment.).⁵⁹ Despite its effectiveness, music teachers model approximately 10–25 percent of the time.⁶⁰ This means that 75–90 percent of the time teachers *talk* about music instead of *making* it. Perhaps some teachers are uncomfortable with demonstrating on their primary and secondary instruments. But to adapt an old adage, an aural picture from the teacher is worth a thousand of that teacher’s words.

In effective modeling, students generalize beyond one instance and apply the modeled skill to new and unfamiliar situations.⁶¹ As seen earlier in this chapter, modeling and rote teaching are integral to sound-to-symbol philosophies such as Kodály, Suzuki, Orff, Gordon, and also El Sistema (the last one through social modeling).

It also follows Bruner’s and Gardner’s hierarchies of knowledge acquisition and representation: As Warren Haston writes, “students should first interact with sound physically using their instruments but

without notation; then form internalized concepts of the sounds they are making; and then later use notation to help demonstrate understanding”.⁶² The stereotype of the Suzuki student who performs well but barely reads music reflects teaching that does not follow through to learning the concept.

For effective modeling, Warren Haston suggests the following strategies:

- Choose a topic that is slightly out of reach of the group’s current ability (i.e., in the Zone of Proximal Development—see p. 222) Concentrate on one topic at a time: Model *legato* *or* *crescendo*, but not *legato and crescendo* at the same time.
- Avoid speaking about the concept, especially at first. Say that the *legato* tone has very connected notes, but do not describe exactly how to use one’s air, tongue, fingerings, etc. Modeling is constructivist, so students will translate for themselves what they hear and shape their response until it matches the model. This ultimately creates stronger learning. Thus, you should sing, play an instrument, and let the model speak for itself. Use whatever best conveys what you are trying to teach.
- Use call-and-echo. This differs from the classic jazz call-and-response, in which the call is answered by a different but complementary response.

Haston also suggests the following procedure for modeling. It relates closely to the procedures laid out by Kodály and Gordon.

Example: Modeling Accents

1. **First, model the opposite of accents.** For example, play four long quarter notes on a single pitch and have students echo using call-and-echo. Once students succeed at this, play four accented quarter notes on the same pitch and have students echo. Repeat until most of the class succeeds, and speak only to point out differences or ask questions, such as “Are my notes more or less connected than yours? Which part of my note sounds different?” This is akin to learning what something is by first learning what it *isn’t*. Gordon’s Music Learning Theory (MLT) calls it discrimination learning. Notice, à la concept learning, how these questions lead students to discover, for themselves, the characteristics of the new concept.
2. **Second, notate the pattern** you have just played on the board and explain the meaning of the accent symbol, where to place it, etc. Continue modeling and echoing the notated pattern, and eventually change pitches on the original rhythm (e.g., F–G–A–F instead of F–F–F–F); later, change the rhythm you model. MLT calls this *symbolic association*.
3. **Third, ask students to find examples of accents in their method book or concert music.** This step separates modeling from rote teaching. Perform these examples as a class—first in isolation (e.g., one measure, or a few notes) and then in the context of a full phrase. It is important not to model the examples before the class attempts them. Students must decode new examples of accents for themselves. In MLT, this is called *inference learning*.⁶⁴ If needed, reinforce the initial call-and-echo from #1 and #2. Otherwise, simply telling them how it goes may cause students to fail the next time they encounter the notation.

It is useful to understand Haston’s procedure for modeling—which is well-suited to the warm-up—but we can integrate effective modeling in other ways, too. If modeling accents in a passage, point out connections to other occurrences of accents the students know. In other words, do not model by rote. Explain how the notation informs how it should be played; how it resembles and differs from similar music in the same piece, or in other pieces. Ask students to notice these connections on their own, too,

and to identify and explain the differences between accented and unaccented notes. Do this informally and even without modeling the example yourself. If students misplay an unfamiliar accented passage, ask “Have you seen that articulation elsewhere in the piece? How did we treat the note there? How did we treat the note that came before it? Can you look ahead to Letter D and find another example we’ll play the same way?”

On Adopting Sound-to-Symbol in the Instrumental Class

Because sound-to-symbol is often different from traditional music education, it is bound to generate questions and skepticism from teachers, parents, students, and administrators.

Combine this with a resistance to the unfamiliar (“That’s not how I learned to do it!”), a perceived pressure from parents and administrators to see students perform as soon as possible, and a lack of support at the middle school and high school level (who may view the beginning level as their feeder), and it may be difficult to adopt a new paradigm.

To those weaned on traditional method books, strict sound-to-symbol instruction may seem confusing because there is no five-line staff in the initial stages of learning. Remember: the goal is to delay the introduction of notation so students can develop audiation skills and musical vocabularies.

In addition, some may argue that time spent on audiation, singing, and pattern acquisition could be better spent on embouchures and technique. Yet research shows that developing the musicianship skills associated with sound-to-symbol learning improves the mechanics of instrumental performance. In her 1987 study, Patricia Ann Grutzmacher showed that:

... the use of harmonization and vocalization activities improved the melodic sight-reading skills of beginning band students significantly more than a traditional method in which notes are individually identified directly from notation and without harmonization and vocalization activities. [Emphasizing] a tonal conceptual approach in the instruction of beginning instrumental music students did not delay the development of technical skills as demonstrated by improved melodic sight-reading skills and by observations made by the researcher.⁶³

Further, researchers generally agree that developing a sense of tonality contributes to the ability to read music and play in tune.⁶⁴

In response to the question “How will Music Learning Theory help my students?,” music educator Scott Shuler writes:

A clarinetist who fails to notice that he is flatting “ti” in major tonality lacks the tonal skills necessary to hear his mistake; a trumpeter who transforms duple meter patterns into triplets lacks a clear sense of duple meter; a saxophonist who cannot sight-read a technically simple melody lacks the ability to generalize from tonal and rhythm patterns he has already learned to the new patterns encountered in the melody. Those problems are therefore appropriately classified as tonal, rhythm, and notational generalization problems, respectively. If Music Learning Theory is truly the process through which persons most efficiently learn tonal, rhythm, and notational skills, then it follows that the application of Music Learning Theory to instruction will enable the conductor to solve those problems most rapidly.⁶⁵

Becoming a better singer is not the most direct path to becoming a trombonist, but it may be the most effective. The key with all of these strategies is to regularly incorporate them into the curriculum.

Audiating, singing, etc., should not be treated as special topics to be introduced once and then never addressed again.

Sound-to-symbol instruction gives students the ability to recognize and correct their own mistakes. Though this requires an upfront investment in time and energy, as audiation improves teachers will not need to micromanage what students play. Director-centered learning thus becomes student-centered learning, as the following examples show.

Director-centered—Teacher tells John he is sharp; John adjusts his tuning slide.

Student-centered—John audiates the sound of in-tune playing and recognizes that he is playing out of tune. He adjusts his slide until he is in tune.

Director-centered—Teacher catches Jennifer playing a B $\sharp$ instead of a B $\flat$ and asks her to correct the note.

Student-centered—Jennifer recognizes that the B $\sharp$ does not fit the tonality of E $\flat$ Major, notices her error and plays the correct note without intervention from the teacher.

Still, it may be difficult to combat the assumption that one must read music in order to play it. A compelling counter-argument is to explain the analogy between music and spoken language and observe that we would not expect students to read aloud from a book before they could speak on their own. Some parents and administrators mistakenly assume that without printed music there can be no concerts during the first semester. Assure them that concertizing is still part of the curriculum. Help them understand that sound-to-symbol instruction provides the same fundamental skills that allow jazz musicians to play an entire concert without looking at music.

As with the introduction of any new idea or methodology, accept the reality that some will object no matter how persuasively we argue, and that eventually the revolutionary methodology will become the “traditional” one.

An instant break away from the traditional approach is thus not recommended, especially if you are not the only teacher in the district. If the beginning instrumental program uses sound-to-symbol but the high school program does not, students may seem unprepared for high school, when in reality they are simply prepared for a different set of expectations. To be successful, change requires the cooperation of music administrators and teachers at all levels. Further, it should be phased in over several years so teachers, students, and parents can acclimate to new teaching approaches and expectations.

An increasingly extensive body of methods and materials is available to support a sound-to-symbol teaching approach:

- For a Kodály-based approach to high school theory classes: Houlahan and Tacka, *From Sound to Symbol: Fundamentals of Music*. New York: Oxford University Press, 2009.
- For Music Learning Theory-based general music recorder instruction: Grunow, Gordon and Azzara. *Jump Right In: The Instrumental Series—For Recorder*. Chicago: GIA Publications, Inc., 1999.
- For Music Learning Theory-based wind, percussion, and string instruction: Grunow, Gordon and Azzara. *Jump Right In: The Instrumental Series—For Winds and Percussion*. Chicago: GIA Publications, Inc., 2001. Froseth and Weaver. *Do It!* Chicago: GIA Publications, 1997. Grunow, Gordon, Azzara, and Martin. *Jump Right In: The Instrumental Series—For Strings*. Chicago: GIA Publications, Inc., 2002. Aldi-Snow, Lenore. *Your Musical Voyage*. New York: Snow Music Press, 2003.

It is also possible to incorporate sound-to-symbol techniques within a traditional approach. Though the overall sequence is important, the realities of teaching allow flexibility. As Bluestine writes: “In theory,

learning should proceed sequentially; but real life doesn't work that way. There is, after all, a difference between Music Learning Theory and music learning reality."⁶⁶

In other words, Music Learning Theory presents a sequential theory but does not define an absolute method. The overall tenets of sound-to-symbol can thus be integrated into nearly any method book, including *Standards of Excellence* (Kjos), *Essential Elements* (Hal Leonard), and the like. Richard Grunow, Professor of Music at the Eastman School of Music and co-author of the *Jump Right In* series, offers the following suggestions:

Suggestions for Applying Principles from *Jump Right In: The Instrumental Series to Instrumental Music Instruction*, by Richard F. Grunow, Michael E. Martin, and Christopher D. Azzara (reprinted with permission)

Musicianship Skills for Teachers:

1. Sing and perform on your instrument by ear 30–40 melodies and bass lines for tunes commonly associated with beginning instrumental music instruction. Sing and play the tunes at musical tempos, with characteristic rhythms, and with connected and separated styles of articulation.
2. Develop skills with a system of tonal syllables and rhythm syllables based on function, as opposed to note names or note values.
3. Develop functional skills on a harmonic instrument (e.g., piano, guitar, and/or autoharp) to perform accompaniments and to establish tonality, meter, and style for the students.
4. Improvise to the melodies you have learned by singing and performing them on your instrument.

When Teaching Students:

5. Teach students to sing and perform on instruments many melodies and bass lines by ear.
6. Sing and play for students, not with students. Observe the students when they sing and play their instruments.
7. Sing tonal syllables and chant rhythm syllables; do not speak tonal syllables or rhythm syllables.
8. Play recordings that demonstrate exemplary musicianship and characteristic tone quality.
9. Establish tonality and/or meter before singing or playing.
10. Remind students to audiate what they are going to perform before they sing or perform on their instrument.
11. Listen to each student sing and play something alone in each lesson.
12. Spend the first three to six months playing by ear, before introducing music notation.
13. Spend the beginning of every lesson or rehearsal playing by ear.
14. Present the first concert without notation.
15. Make comparisons by teaching songs in both duple meter and triple meter. Also learn songs with other measure signatures (e.g., $\frac{5}{8}$ and $\frac{7}{8}$).
16. Make comparisons by teaching songs in both major tonality and minor tonality. Also learn songs in other tonalities (e.g., Dorian and Mixolydian).
17. Teach students the proper names of tonalities (e.g., major/minor), meters (e.g., duple/triple), and functions (e.g., tonic/dominant/macrobeats/microbeats), and how to recognize them by ear.

Students Should:

18. Sing first and then perform on their instruments.
19. Move their bodies in a variety of ways to the music they are learning.
20. Audiate the harmonic context of the music (e.g., resting tone, bass line, and harmonic functions).
21. Audiate the rhythmic structure of the music (e.g., macrobeats/large beats and microbeats/small beats).
22. Take the preparatory breath in the tempo of the music before performing.
23. Develop a vocabulary of tonal and rhythm patterns that they can recognize by ear, perform, read, and write.
24. Demonstrate proper posture, hand position, embouchure, and instrument position.
25. Sing while placing fingers for the correct pitches on the instrument.
26. Develop musical independence right from the start. It is each student's responsibility to play in tune and stay in tempo.
27. As much as possible, avoid placing tapes or dots on the fingerboards of string instruments. They may assist hand position; they do not assist audiation.
28. Play the same song in many keys; play the same song in many tonalities (major, minor, Dorian, Mixolydian, etc.).
29. Play the same song in many meters (duple, triple, $\frac{5}{8}$, $\frac{7}{8}$, etc.).
30. Improvise.

It is in the spirit of this pedagogical flexibility that we offer an approach for teaching rhythm, melody, tonality, and harmony in subsequent chapters—ideas that do not adhere strictly to a single viewpoint but rather are hybrids of other well-documented methods.

Activities/Assignments for Further Exploration

1. How do you view the relationship between music and language? Do some of the connections seem stronger than others? Can you think of other ways in which music and language are similar or different?
2. If music can be taught in ways that are similar to a language, do you think there are other disciplines that could benefit from a similar approach?
3. The poet Longfellow famously said, "Music is the universal language of mankind." Do you agree? If so, how can we account for the cross-cultural differences between musical styles?
4. Kodály insisted on the use of folk music as a way to learn one's own musical culture. What are examples of folk music from your country? Is this repertoire familiar to children? Do you think it matters?
5. Suzuki believed that students should always revisit and practice materials from the early levels. Why do you think this is so?
6. Suzuki emphasized the importance of parent involvement in practicing. In what ways can this be achieved in public school instrumental settings?
7. According to Gordon, what stage(s) of learning would the following activities fall under?

Learning a rhythm for the first time
 Reading a piece of music for the first time
 Improvising
 Writing in the counts to a rhythm
 Figuring out a melody successfully “by ear”

8. What are the potential advantages of “hybridizing” different learning approaches? Potential disadvantages?

Notes

- 1 Leonard Bernstein, *The Unanswered Question: Six Talks at Harvard* (Cambridge, MA: Harvard University Press, 1976), 54.
- 2 Ibid., 55.
- 3 Ibid., 56–65.
- 4 Daniel J. Levitin, *This Is Your Brain on Music* (New York: Penguin Publishing, 2007), 128.
- 5 Aniruddh D. Patel, *Music, Language, and the Brain* (New York, Oxford: Oxford University Press, 2008), 177.
- 6 A. D. Patel, J. R. Iversen, and J. C. Rosenberg, “Comparing the Rhythm and Melody of Speech and Music: The Case of British English and French.” *Journal of the Acoustical Society of America*, 119, Part 1 (May 2006): 3034–3047.
- 7 Melissa Hogenboom, “Moving to the rhythm can ‘help language skills’.” *BBC, Science & Environment* (September 8, 2013), <http://www.bbc.com/news/science-environment-24124158>.
- 8 Patel, Iversen, and Rosenberg, “Comparing the Rhythm and Melody,” 234–237.
- 9 Ibid.
- 10 Ibid., 119.
- 11 Ibid., 223. Patel summarizes the differences: “Spoken French had significantly lower pitch interval variability than spoken English, and music mirrored this pattern. That is, French musical themes had significantly lower interval variability than English themes. Put another way, as the voice moves from one syllable to the next in speech, the size of each pitch movement is more uniform in French than in English speech.”
- 12 Ibid., 224.
- 13 R. A. Miranda, and M. T. Ullman, “Double Dissociation between Rules and Memory in Music: An Event-Related Potential Study.” *NeuroImage* 38, no. 2 (2007): 331–345.
- 14 Ibid., 331.
- 15 Steven Pinker, *How the Mind Works* (New York: Norton, 1997), 532.
- 16 Steven Pinker, *The Language Instinct* (New York: William Morrow and Co., 1994), 237.
- 17 Levitin, *This Is Your Brain on Music*, 262.
- 18 Frank Smith, *Reading Without Nonsense*, 2nd edn. (New York: Teachers College Press, 1985), 50.
- 19 Ibid.
- 20 Ibid., 19.
- 21 Eric Bluestine, *The Ways Children Learn Music: An Introduction and Practical Guide to Music Learning Theory*, 2nd edn. (Chicago: GIA Publications, 2000), 88.
- 22 John M. Feierabend, “Developing Music Literacy with Conversational Solfege: An Aural Approach for an Aural Art.” Feierabend Association for Music Education. www.feierabendmusic.org/conversational-solfege/, accessed July 14, 2019.
- 23 Micheál Houlihan, and Philip Tacka, *Kodály Today: A Cognitive Approach to Elementary Music Education* (Oxford, New York: Oxford University Press, 2008), 23.
- 24 John Feierabend, “Integrating Music Learning Theory into the Kodály Curriculum.” In *Readings in Music Learning Theory*. Ed. Darrel L. Walters and Cynthia Crump Taggart (Chicago: GIA Publications, 1989), 264.
- 25 Zoltán Kodály, *55 Two-Part Exercises* (New York: Boosey and Hawkes, 1960), 2.
- 26 Jean Sinor, *Kodály Handbook* (Morristown, NJ: Silver Burdett & Ginn, 1988), 38.
- 27 Mary Shamrock, “Orff-Schulwerk,” *Music Educators Journal* 83, no. 6 (1997): 41–44.
- 28 Ibid.

- 29 B. H. Creider, "Music Learning Theory and the Suzuki Method." In *Readings in Music Learning Theory*. Ed. Darrel L. Walters and Cynthia Crump Taggart (Chicago: GIA Publications, 1989), 260.
- 30 John D. Kendall, *The Suzuki Violin Method in American Music Education: What the American Music Educator Should Know about Shinichi Suzuki* (Washington D.C.: MENC, 1973), 13–15.
- 31 Edwin Gordon, *Buffalo Music Learning Theory: Resolutions and Beyond* (Chicago: GIA, 2006), ix.
- 32 This is precisely why Suzuki delays the introduction of notation for up to three years.
- 33 Edwin Gordon, *Learning Sequences in Music: A Contemporary Music Learning Theory* (Chicago: GIA Publications, 2007), 4. (Contemporary editions of his method often accelerate this, partly as an accommodation to the traditional timetable of learning to read music.)
- 34 Ibid., 59.
- 35 Gordon, *Buffalo Music Learning Theory*, 7.
- 36 Ibid., ix.
- 37 Ibid.
- 38 Gordon, *Learning Sequences in Music*, 90.
- 39 Michael Houlahan, and Philip Tacka, *From Sound to Symbol: Fundamentals of Music* (New York: Oxford University Press, 2009), 146.
- 40 Ibid., 147.
- 41 Ibid., 148.
- 42 Ibid., 149.
- 43 Ibid., 150.
- 44 Ibid.
- 45 Ibid., 152.
- 46 Bluestine, *The Ways Children Learn Music*, 35.
- 47 Zoltán Kodály, and Ferenc Bónis, "Pentatonic Music." In *The Selected Writings of Zoltán Kodály* (London, New York: Boosey & Hawkes, 1974), 221.
- 48 Zoltán Kodály, "A Hundred Year Plan." In *The Selected Writings of Zoltán Kodály*, ed. Ferenc Bónis (London: Boosey & Hawkes, 1974), 161.
- 49 Feierabend, "Integrating Music Learning Theory," 264.
- 50 Bluestine, *The Ways Children Learn Music*, 260.
- 51 Beth Landis and Polly Carder, *The Eclectic Curriculum in American Music Education: Contributions of Dalcroze, Kodály, and Orff* (Washington D.C.: Music Educators National Conference, 1972), 1–2.
- 52 Daniel J. Wakin, "Venerated High Priest and Humble Servant of Music Education." *New York Times*, March 1, 2012.
- 53 Eric Booth, with input from the 2009–2010 class of Sistema Fellows and Mark Churchill. "El Sistema USA." <http://www.elsistemausa.org/guiding-principles.htm>, accessed January 7, 2015.
- 54 Ibid.
- 55 Ibid.
- 56 Melissa Lesniak, "El Sistema and American Music Education," *Music Educators Journal* 99, no. 2 (2012), 64.
- 57 Wakin, "Venerated High Priest."
- 58 Richard C. Sang, "A Study of the Relationship between Instrumental Music Teachers' Modeling Skills and Pupil Performance Behaviors." *Bulletin of the Council for Research in Music Education*, no. 91, Eleventh International Seminar on Research in Music Education (Spring, 1987), 155.
- 59 Warren Haston, *Modeling for Band: Efficient Teaching and Authentic Learning*, GIA Publications, 2010, DVD.
- 60 Ibid.
- 61 Warren Haston, "Teacher Modeling as an Effective Teaching Strategy." *Music Educators Journal* 93, no. 4 (2007): 28.
- 62 Haston, *Modeling for Band*.
- 63 Patricia Ann Grutzmacher, "The Effect of Tonal Pattern Training on the Aural Perception, Reading Recognition, and Melodic Sight-Reading Achievement of First-Year Instrumental Music Students." *Journal of Research in Music Education* 35, no. 3 (1987): 177–178.
- 64 Ibid., 171.
- 65 Scott Shuler, "Music Learning Sequence Techniques in Instrumental Performance Organizations." In *Readings in Music Learning Theory*. Ed. Darrel L. Walters and Cynthia Crump Taggart (Chicago: GIA, 1989), 210.
- 66 Bluestine, *The Ways Children Learn Music*, 57.

Further Reading

- Gordon, Edwin. *Buffalo Music Learning Theory: Resolutions and Beyond*. Chicago: GIA, 2006.
- Gordon, Edwin. *Learning Sequences in Music: A Contemporary Music Learning Theory*. Chicago: GIA Publications, 2007.
- Houlahan, Mícheál, and Philip Tacka. *Kodály Today: A Cognitive Approach to Elementary Music Education*. Oxford, New York: Oxford University Press, 2008.
- Kendall, John D. *The Suzuki Violin Method in American Music Education: What the American Music Educator Should Know about Shinichi Suzuki*. Washington DC: MENC, 1973.
- Kodály, Zoltán, and Ferenc Bónis. *The Selected Writings of Zoltán Kodály*. New York: Boosey & Hawkes, 1974.
- Patel, Aniruddh D. *Music, Language, and the Brain*. New York, Oxford: Oxford University Press, 2008.
- Suzuki, Shinichi. *Nurtured by Love: The Classical Approach to Talent Education*. Secacus, NJ: Suzuki Method International, 1983.
- Suzuki, Shinichi, Elizabeth Mills, and Therese Cecile Murphy. *The Suzuki Concept: An Introduction to a Successful Method for Early Music Education*. Berkeley, CA: Diablo Press, 1973.
- Walters, Darrel L., and Cynthia Crump Taggart, eds. *Readings in Music Learning Theory*. Chicago: GIA Publications, 1989.

Chapter 2

Teaching Rhythm and Rhythm Reading

Audiation, Pulse, Pattern, and Meter

To Guide Your Reading

What is the connection between movement and rhythm?

How can movement help our students internalize, feel, and understand rhythm better?

What is the difference between viewing rhythms as patterns (“words”) and individual notes (“letters”)?

How can the theories of sound-to-symbol be applied to teaching rhythm?

How can flashcards be used to teach students rhythmic patterns (i.e., rhythm words)?

What role does music theory play when learning rhythm notation?

What common problems do students encounter when learning rhythmic notation and time signatures?

With what techniques can we strengthen our students’ internal sense of subdivision?

What role do patterns have in developing reading abilities?

How do rhythm syllables help students learn rhythm?

What are the characteristics of an effective rhythm syllable system?

Education does not consist in creating faculties which the pupil does not possess, but rather in enabling him to obtain the utmost possible benefit from those he does possess.¹

Muscles were made for movement, and rhythm is movement. It is impossible to conceive a rhythm without thinking of a body in motion.²

Émile Jaques-Dalcroze

Teaching rhythm to beginning instrumentalists is challenging, because to do it properly one must teach more than just the theory behind notation. Understanding proportional relationships between rhythmic values does little on its own to promote audiation and accurate performance of those rhythms. If the processes of calculating and notating rhythmic values are to have musical meaning for students, we must first connect them kinesthetically to meter and rhythmic patterns, and only then develop their ability to audiate and read. Sound-to-symbol is a powerful ally in this since it stresses the importance of experiencing before doing; of “speaking” a language before learning to read it. Many of the techniques and strategies in this chapter are particularly well suited for beginning band and orchestra students, but they are equally effective with advanced players.

These strategies could be criticized on the grounds that they relieve students of the burden of figuring something out for themselves. But as with language, students must learn rhythm by the way it feels and sounds, not by the way it looks. The role of notation then becomes clear: It is a symbolic representation and organization of what one already experiences.

Dalcroze, Rhythm, and Movement

Physical movement as a means to internalize rhythm was passionately advocated by Émile Jaques-Dalcroze (1865–1950). While teaching at the conservatory in Geneva, Switzerland, Dalcroze developed his theory of “eurhythmics.” Underlying eurhythmics is the principle that all music-making comprises three types of activities:

1. those that utilize the body/muscular system to perceive rhythm
2. those that utilize the ear to perceive sound
3. those that utilize the voice to reproduce what we perceive.

Dalcroze believed that mature music-making involves all three elements, but that early on each one has to be developed separately.

No schoolmaster would set a child to draw something with which he was not familiar, and before he knew how to handle a pencil. Nor would he begin to teach him geography before, having learnt to walk and gesticulate, he had acquired an elementary sense of space; nor direct him to draw a map until he could not only handle a pencil and trace lines, but had also acquired both a sense of space and an idea of the lie of the country. No one can exercise several faculties at the same time before he has acquired, however crudely, at least one faculty.³

*Dalcroze insisted that instrumental study should not precede rhythmic study and ear training.*⁴ He believed the first faculty that develops is the muscular system’s perception of rhythm. The body is naturally rhythmic—from the beating of the heart, to the pace of the breath, to the meter of walking, to the conscious motion of limbs and fingers. He found that “heredity, environment, and maladjustment had buried or restrained” these instinctive forms of rhythm.⁵

Eurhythmics emphasizes a fundamental connection between rhythmic motion and physical motion. “Rhythm is movement,” Dalcroze wrote, and the physical experience of that motion is a prerequisite for musical consciousness.⁶ Jo Pennington explains it this way: Instead of saying, “I know,” students must first say “I have experienced.”⁷

Neuroscience and Rhythm

Science backs up Dalcroze's connection between rhythm and movement. Research has shown that the part of the brain that guides movement is the same part that regulates timing and tracks the beat: the cerebellum.⁸ The cerebellum is one of the oldest structures in the brain, and in fact it is often called the "reptilian brain." Neuroscientist Daniel J. Levitin points out that it also plays a role in reward, motivation, and emotion, and suggests there is a compelling evolutionary reason that movement, rhythm, and emotion are neurally connected:

Not all emotional activities lead to motor movements, but many of the important ones do, and running is prime among them. We can run faster and far more efficiently if we do so with a regular gait—we're less likely to stumble or lose our balance . . . And the idea that emotions might be bound up with cerebellar neurons makes sense too. The most crucial survival activities often involve running—away from a predator or toward escaping prey—and our ancestors needed to react quickly, instantly, without analyzing the situation . . . In short, those of our ancestors who were endowed with an emotional system that was directly connected to their motor system could react more quickly, and thus live to reproduce and pass on those genes to another generation.⁹

Interestingly, tonality and melody are controlled by a different brain area—the cerebral cortex. One of the fascinating features about the brain is that the ear simultaneously sends neural information to both the cerebral cortex and the cerebellum. Our perception of music—physically, emotionally, intellectually—is then created by how they process this information and bridge themselves together.¹⁰

Rhythm and movement permeate music beyond the durational patterns we typically think of as rhythms: Harmonic rhythm, melodic flow, phrasing, rhythm created by text, duration/rhythmic nuances created by dynamics and articulations, even musical motion created by form and structure are all concepts for which students must say, "I have experienced!"¹¹

Eurhythmic exercises encourage students to move freely and individualistically in a way that reflects the sounds to which they listen. In traditional Dalcroze, the teacher improvises to encourage spontaneous movements. "The mastery of muscular energy being essential for the perfect realization of rhythm, the muscles should be subjected separately and simultaneously to dynamic exercises, involving gradations of force, successive transitions, and sudden contrasts—likewise contrasting simultaneous contrasts."¹²

Dalcroze developed his theories at a time when free-form interpretative dance was developing as a response to classical ballet. His ideas influenced a generation of world-class dancers, including Martha Graham. However, his goal was not to homogenize students' movements.¹³ As Dalcroze himself writes:

A striking phenomenon in lessons in eurhythmics is the extreme diversity of individual movements on the part of those who do the same exercises together, to the same music. In other words, there are great differences of interpretation of the same musical rhythms by different persons. This variety corresponds exactly to the personal characteristics of the various pupils.¹⁴

To those who argue traditional instrumental education offers the same value, Dalcroze counters:

[I]t can be proved that a purely digital acquaintance with rhythmic values is inadequate. Movement is not simply a matter of time, but also of accent and direction . . . If you leave it entirely to the fingers to create motor images in the mind, these images will inevitably remain feeble and incomplete.¹⁵

The entire body must become a musical instrument, moving through space in representation of pulse, direction, subdivision, and flow.¹⁶ Exploring the biological connections among rhythm, timing, and movement is more than a touchy-feely teaching technique. It has significant implications for teaching rhythm and notation. Method books usually teach rhythmic notation from page one, treating it as a mathematical process. But if we consider the connections between movement and rhythm, experience and knowing, and language and music, this is clearly counterproductive.

Most students engage in a simple kind of movement: foot tapping. On its benefits, Daniel L. Kohut, author and respected music educator, writes:

The wind player, of course, cannot count aloud while playing. If he does not tap his foot, his only recourse is to count to himself. With beginners this usually results in their not counting at all. The teacher needs tangible proof that the student feels the beat. Foot tapping provides this evidence . . . The teacher can read the results of the foot; he cannot read the student's mind.¹⁷

Foot tapping also provides students with a way to keep track of upbeats and downbeats. Pedagogical usefulness aside, however, foot tapping supplements but does not replace other movement exercises. Tense or fatigued foot muscles often create an unsteady pulse, and since the foot only moves up and down there is no expression of meter. Further, recent research suggests that movements larger than just the foot are needed for the body to develop a connection with rhythm. Observe the foot tapping of young musicians and notice that their movement does not always synchronize with the pulse. Now watch the feet of professional musicians: They rarely move at all because their sense of internal rhythm is so well developed. Even so, as long as foot tapping (or its less obtrusive cousin, toe tapping within the shoe) is not the “sole” way we ask students to move, it may help them externalize and strengthen their internal pulse.

To truly internalize a sense of rhythm students must experience the analogy between musical time and physical space. Moving to rhythm allows students to feel a constant pulse (the beat), create context and connections among individual durations (rhythmic patterns, or words), and experience those patterns within a hierarchical framework of strong and weak beats (meter).¹⁸

Using Movement in the Instrumental Music Classroom

A full-blown eurhythmics program is impractical for band and orchestra classes. First, Dalcroze suggested a eurhythmic education for students before they turn nine,¹⁹ which is before most students begin school-based instrumental instruction.²⁰ Second, eurhythmics' full-body, dance-like movements are unwieldy for rehearsal spaces filled with chairs, stands, and instruments. However, in his description of Music Learning Theory, Gordon shows that meaningful movement is feasible if it involves upper body motions—head, shoulders, arms, wrist, and upper torso.²¹

Here are a few strategies to incorporate these techniques into the instrumental music curriculum:

1. Take baby steps when incorporating eurhythmics into the rehearsal—try only a few minutes at a time, and no more than once per session.
2. Incorporate movement into the body of the rehearsal—not just for warmups. Whether fairly or not, students often treat warmups as chores to do before getting to the real music.
3. Mix large and small group settings—some students respond to the psychological security of moving in a large group; others prefer the relative privacy of a lesson or sectional, when they do not perceive that their peers are judging them.
4. Have a rehearsal (or part of one) without instruments, music stands, and chairs—this removes the distraction and bulkiness of equipment and frees space for uninhibited movement.

Conducting as a Movement Exercise

Rhythmic movement exercises are not the same as conducting. The goal is not to articulate every pulse in an organized manner, but instead to experience the continuous flow of musical time. Gordon writes:

The model students observe does not include or even suggest “keeping time” by pausing between macrobeats or accenting macrobeats . . . Musical expression occurs between macrobeats, not on them . . . If anything, ballet motion is the rule, reference never being made to counting beats or musical time.²²

In spite of Gordon’s warning, conducting can be used as a gateway exercise into expressive movement. Conducting can be framed as an athletic activity, and just as students enjoy moving in the context of baseball and basketball, conducting patterns are a non-threatening way of moving expressively under the guise of technique. Once the basic patterns are learned, encourage students to use them expressively by varying the size and intensity of the patterns depending on the dynamics and articulations of the rhythms being performed. Eventually we use a bait and switch, ask students to conduct without beating, much in the same way conducting students are often asked to do: Take the right hand away, and just conduct the phrase, not only the beats. Progress gradually to full body movement, almost as a sort of stationary upper body dance.

Beyond Exercises—Expressive Moving while Performing

Motion helps to externalize internal expressiveness. In fact, it is difficult to *be* expressive without *moving* expressively. It is natural for a sports fan to throw his hands in the air while cheering a touchdown or for a debater to gesticulate with his hands when he makes an urgent point. We must draw similar expressiveness from musicians.

The lessons of Dalcroze and Gordon thus need not be confined to audiation and eurhythmics. Encourage students—even beginners—to move while they play, just as professional chamber players do: Use the upper body to show breath, phrasing, and releases; move through a phrase; punctuate articulations, etc.

- Model for students ways to move expressively and retain good posture and technique while doing it.
- Show students examples from pop culture. Music videos and live performances from today’s mainstream stars are filled with examples of movement.

Choosing a System of Rhythm Syllables

As we have seen with Gordon's Music Learning Theory, one of the links between hearing a pattern and being able to read its notation is "verbal association," which provides an aural label for a sound. For example, we may choose to label the rhythmic pattern "doo-doo-doooooooo" as "Ti Ti Ta" or "1 and 2." Whichever system of syllables is used, that label applies whenever that pattern appears. In a sense it becomes that pattern's name and a way to apply structure to rhythmic sounds. As seen later in this chapter, rhythm syllables are also used to decode unfamiliar rhythms that one does not already know.

There is no ideal system of rhythm syllables. Professor Bruce Dalby outlines four attributes of appropriate systems, and we have added a fifth:²³

1. It is based on how the rhythm sounds, not on how it is notated. Since enrhythmic figures sound identical to each other, they mean the same thing and should use the same syllables (e.g., $\frac{4}{4}$ ♩ = 60 | ♩ ♩ ♩ ♩ sounds identical to $\frac{3}{4}$ ♩ = 60 | ♩ ♩ ♩ ♩).
2. Each unique metrical subdivision receives a unique syllable. For example, the syllable for the second of three subdivisions should be different from the syllable for the second of two subdivisions. Triple subdivision means something different from duple subdivision, and the syllables should reinforce that.
3. Its syllables are easy to say, chant, or sing.
4. The system can express simple and complex rhythms.
5. The system is suitable for use at multiple levels of education.

Here are four of the most common systems in use today:

The Classic Kodály Syllables

The Classic Kodály syllables (Figure 2.1) are most appropriate for elementary school settings. They do not display the level of sophistication required for complex rhythms. In this system, each syllable represents a specific note value rather than a relative relationship between notes and beats. For example, "ta" refers to a quarter note regardless of whether or not the quarter note receives the beat. This is useful for developing reading and dictation skills but is less compatible with a contemporary sound-to-symbol approach.

FIGURE 2.1 The Classic Kodály Syllables (for sustained notes the vowel sound is elongated until the next consonance articulation)



Takadimi

Proposed by Richard Hoffman, William Peltó, and John W. White, Takadimi syllables are beat-oriented rather than notation-oriented. No matter what note value is used in notation, "ta" always refers to the macrobeat and "di" always refers to a bisection of that macrobeat. Thus, $\frac{4}{4}$ ♩ ♩ ♩ ♩, with ♩ getting the pulse, $\frac{3}{4}$ ♩ ♩ ♩, with ♩ getting the pulse, and $\frac{6}{8}$ ♩ ♩ ♩, with ♩ getting the pulse, all receive the syllables *ta ta ta di ta di*. Why? Because they are enrhythmic with each other. (Enrhythmic refers to rhythms that are notated differently but sound the same.²⁴) The use of the same syllables reinforces the fact that they sound and feel alike even though the notation looks different (see Figure 2.3).

Kodály and Takadimi systems are easy to say clearly and quickly.²⁵ They provide strong consonants for each articulation, mimic the way wind players use their tongue when single and double tonguing, and are flexible enough to use with simple or complex rhythms (see Figure 2.2). Takadimi differentiates simple and compound beat divisions with a unique syllable for each one, but provides a common syllable for subdivision points where the two systems align (i.e., the downbeat of simple and compound beat both sound “ta”; the midpoint of each beat sounds “di”).²⁶ Also, the use of non-numeric sounds makes it appropriate for very young students. However, for those who also want to allow beat counting, Don Ester, John Scheib, and Kimberly Inks suggest replacing “ta” with the proper number (for example, see Figure 2.4).²⁷

FIGURE 2.2 Takadimi

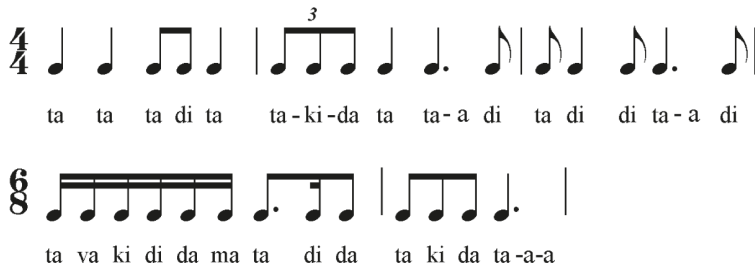
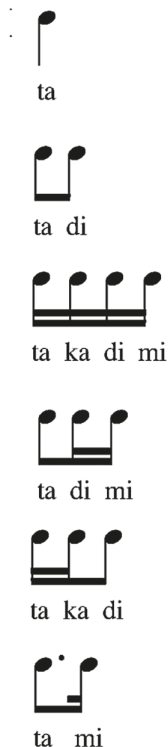


FIGURE 2.3 Takadimi—Enrhythmic One-Beat Patterns in Simple Meters (the note value that receives the pulse changes, but the rhythm syllables stay the same because the rhythmic relationships stay constant)

Rhythmic Patterns in Simple Meters

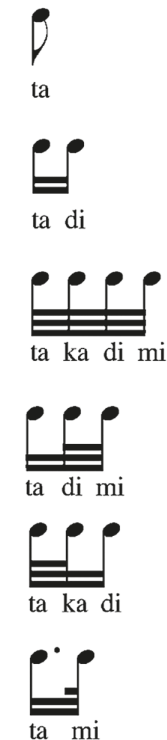
Ta = Quarter Note

One-beat length patterns:



Ta = Eighth Note

One-beat length patterns:



Ta = Half Note

One-beat length patterns:

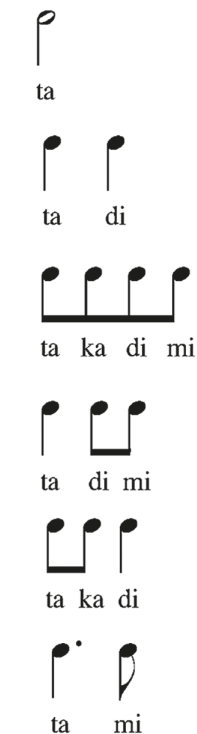


FIGURE 2.3 continued

		
ta ka	ta ka	ta ka
		
ta ka mi	ta ka mi	ta ka mi
Two-beat length patterns:		
		
taaaa	taaaa	taaaa
		
taaaa di	taaaa di	taaaa di
		
ta diiii	ta diiii	ta diiii
		
ta di di	ta di di	ta di di

Counting System

Like the Takadimi system, the Counting System, sometimes referred to as the “Eastman Counting System,” is beat flexible, though “1e+a” is usually associated with sixteenth notes. But it could just as easily be applied to straight eighth notes in a $\frac{3}{4}$ measure (with $\downarrow$ receiving the pulse), or any number of enrhythmic variations. Counting syllables are easy to say quickly, and the numbers help students keep track of their place in the meter. The numbers also facilitate communication between conductor/player and the rest of the ensemble. However, the use of numbers makes it less appropriate for very young

FIGURE 2.4 Replacing “ta” with the Proper Number



1 ka di mi 2 di



1 ka da 2 va ki di da ma