

A Critical Review of Current Aural Skills Materials and Pedagogical Practices

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Editors' Note: Many books and software programs are discussed in the following article, and these materials are listed in four examples in the article: Example 2 shows books focused on listening skills alone along with those that integrate listening and sight singing; the four books presented in Example 4 include aural skills along with other topics; Example 5 covers anthologies of melodies and rhythms; and Example 7 lists aural skills software. A set of discussions among the authors that grew out of their collaboration on this article is available on [YouTube](#). In these videos, titled "Five Conversations about Aural Skills: Present and Future," the authors talk with one another and with Melissa Hoag, the reviews editor of JMTP, about aural skills pedagogy as it currently stands and offer ideas about its future.



The past 25 years have seen a surge of scholarship on aural skills pedagogy. Among other trends, this scholarship has brought together cognitive science and pedagogy; advocated for activities such as improvisation, Eurythmics, and error detection; introduced new teaching techniques; urged new goals and approaches; and asked us to consider how aural skills teaching and ideologies impact diversity, equity, and inclusion.

And yet, evidence suggests that mainstream aural skills teaching has not changed all that much in this time. In 1997, David Butler complained that the *Journal of Music Theory Pedagogy*'s articles on aural training "could have been written a century ago" because of their focus on the tasks of sight singing and dictation (39). Two surveys published in 2020 indicated that these still dominate: Chenette et al. found that the most common activities in aural skills classes were still sight singing and melodic dictation, while Beavers and Davis found that college faculty estimated that they spend more than 73% of their aural skills class time on singing, dictation, and transcription (41). In aural skills textbook reviews in the late twentieth century, Gary Karpinski criticized the use of acontextual interval identification tasks (1989, 129 and 1993, 243); many current textbooks still include such drills.

Activity	Percentage of instructors
Sight singing	99%
Melodic dictation	97%
Transcription	94%
Harmonic dictation	92%
Bass dictation	76%

Example 1.

The five most common assessed activities reported by respondents in Chenette et al. 2020.

One way for new findings, suggestions, and directions in aural skills pedagogy to make their way into mainstream classrooms is through textbooks. After all, there is a difference between developing the foundation of a new pedagogical technique in a research article, and developing it into a set of materials designed to support a multi-semester course of study. In addition, aural skills classes are taught by a wide range of instructors: music theorists and applied teachers, tenure-stream and contingent instructors, high-school teachers and graduate students and faculty, experienced and inexperienced. Since many, perhaps most, of these do not have the time or motivation to read the latest aural skills pedagogy research, they rely on some combination of their experience and a textbook.

This article synthesizes a review of current aural skills teaching materials with a critical survey of the field. As in a traditional review, our focus will be on current textbooks, apps, and websites. But as we consider the strengths and weaknesses of each of these, we will evaluate current practices in aural skills pedagogy. These practices, many of which have not changed much in a generation (or longer), certainly have benefits for students. Yet new goals, activities, and techniques are also worth exploring. We will note where these have been incorporated into current materials, and—in light of scholarship that has not yet been effectively implemented—we will identify particularly important or promising directions for future editions or new materials.

Our review proceeds in two parts. First, we address the current state of aural skills materials in three categories: listening-focused textbooks, sight-reading anthologies, and digital platforms. We then consider future directions and possibilities for aural skills, considering both the repertoire we teach and the activities we use to do so.

Listening/Integrated Textbooks

The thread that ties together this category of texts is a focus on listening. Benward and Kolosick write: “Intelligent listening is the most important thing a musician does” (2010,x).

These texts (Example 2) fall into two categories: “listening” and “integrated.” The “listening” texts focus on the quintessential listening-based skill of dictation (melodic, harmonic, and/or rhythmic), often accompanied by interval or chord identification drills. Such identification drills are typically framed as necessary or helpful preparation for dictation, despite longstanding questions about whether this is actually true.¹ Many of these books have relatively little instructional text. Several, however, focus on listening skills more broadly, such as arpeggiations, keyboard progressions, and sing-and-play exercises (Karpinski), or “contextual listening” for many different aspects of music (Phillips/Murphy/Clendinning/Marvin, hereafter Phillips/Murphy).² These are commonly used alongside a sight-singing anthology. “Integrated” texts, on the other hand, provide materials to support study of both listening skills and sight-singing skills. Compared to sight-singing anthologies (reviewed below), they tend to have more instructional text and fewer melodies.

Building listening skills requires (1) application of concepts/knowledge, implying a necessary connection to music theory, and (2) development of habits/strategies, which would ideally draw on findings in cognitive science. Of these two foundations, cognitive science is most often neglected, but is explicitly evoked in two texts. Jones/Shafte/Chattah (hereafter Jones/Shafte) emphasizes “statistical learning” of patterns, “segmentation into meaningful groups” (chunking), using harmonic context to activate holistic knowledge structures, and “*targeted or deliberate practice*” with SmartMusic (xvi–xvii). Karpinski states, “The structure and content of this book have been shaped in large part by recent research in music cognition and perception,” and lists as examples “knowledge about pulse perception,” “studies on tonic inference,” “research on short-term musical memory,” “concepts of holistic perception,” and “discoveries about perceptual streaming” (xiii–xiv).

1 For example, Telesco asks, “Do students need to be proficient at identifying random intervals before they can move on to something else? No, I don’t believe so. Do they need to be proficient at hearing scale degrees and relationships within the context of a key? Most certainly” (1991, 179). Karpinski asks, “Should we train listeners to calculate lists of intervals between successive pitches? [. . .] Such inventories would be true and eminently knowable, but would they be worthwhile and meaningful?” (2000, 53).

2 Several texts are not integrated but are intended to be used alongside co-branded anthologies, including notably Karpinski and Phillips/Murphy.

Author(s)	Title	Ed.	Year	Publisher	Price	Etext	Type	Additional Materials
Evan Jones and Matthew Shaftel, with Juan Chattah	<i>Aural Skills in Context: A Comprehensive Approach to Sight Singing, Ear Training, Harmony, and Improvisation</i>	—	2014	Oxford	145	—	Integrated	auralskillsincontext.com provides audio for contextual listening; SmartMusic integration.
Justin Merritt and David Castro	<i>Comprehensive Aural Skills: A Flexible Approach to Rhythm, Melody, and Harmony</i>	2nd	2020	Routledge	145	130.5	Integrated	www.routledge.com/cw/merritt hosts audio for dictations, answer keys, and sight-singing hearing sheets.
Kent D. Cleland and Mary Dobrea-Grindah	<i>Developing Musicianship through Aural Skills: A Holistic Approach to Sight Singing and Ear Training</i>	3rd	2021	Routledge	120	108	Integrated	www.routledge.com/cw/cleland provides practice quizzes, exercises, and audio for dictations.
Daniel McCarthy and Ralph Turek	<i>Singing and Dictation for Today's Musician</i>	—	2020	Routledge	89.95	80.95	Integrated	www.routledge.com/cw/mccarthy hosts answer keys.
Paul Murphy, Joel Phillips, Elizabeth West Marvin, and Jane Piper Clendinning	<i>The Musician's Guide to Aural Skills: Ear Training</i>	4th	2021	Norton	101.3	50	Listening	Norton InQuizitive integrates with LMS; Playlists give audio for "Try It" and Contextual Listening excerpts.
Gary S. Karpinski	<i>Manual for Ear Training and Sight Singing</i>	2nd	2017	Norton	106.3	—	Listening	Norton InQuizitive integrates with LMS; Playlists give audio for dictation / transcription excerpts.
Rudy Marcozzi	<i>Strategies and Patterns for Ear Training</i>	—	2009	Routledge	125	112.5	Listening	2 CDs: recordings of even-numbered exercises and Naxos recordings of examples
Michael Horvit, Timothy Koozin, and Robert Nelson	<i>Music for Ear Training</i>	4th	2020	Cengage	125	85	Listening	musicforeartraining.com provides audio for workbook exercises.
Benward and Kolosick	<i>Ear Training: A Technique for Listening</i>	7th	2010	McGraw Hill	114.8	—	Listening	http://www.mhhe.com/let7 provides drills, as well as audio for selected workbook exercises.

Example 2.

Listening/Integrated textbooks.

Almost all of these texts, on the other hand, are designed to mirror the order and content of standard music theory curricula—reflecting the fact that music theory and aural skills instruction is often either integrated or coordinated.³ These curricula typically begin with a semester of “fundamentals,” followed by a sequence of classes that cover diatonic harmony, chromatic harmony, modulation, form, and perhaps “post-tonal” music.⁴ The parallels are most obvious in textbooks that are co-branded with music theory texts: *Singing and Dictation for Today’s Musician* (*Theory for Today’s Musician*), and *The Musician’s Guide to Aural Skills* (*The Musician’s Guide to Music Theory*). The main outlier in terms of organization is Merritt/Castro, which is divided into three separate parts devoted to rhythm, melody, and harmony, but even here, the chapter titles within the section labeled “Part 3: Harmony” could just as easily be used in a music theory text.

A number of scholars have questioned the tight coupling of music theory and aural skills. Michael Rogers claims that “intellectual comprehension and hearing abilities develop at completely different rates—the ear, generally, lagging behind the eye and mind” (Rogers 2004, 16–17); similar statements appear in Klonoski 2000 and Lovell 2021. Timothy Chenette goes even further, arguing that aural skills classes should “move out of their current state of curricular dependency on music theory and into a new position of prominence as the foundation of all music study” (2021c, 4.10). The only textbook that explicitly urges a looser relationship between music theory and aural skills is the Karpinski, which notes that “the difference [in learning sequences between these fields] is most significant at the early stages of development” (xviii). As such, early chapters in this text avoid notation. Yet even many of Karpinski’s chapters map rather neatly onto those of theory textbooks—including, for example, chapters on such core theory topics as “The Augmented Sixth Chords.”⁵ There may

3 Chenette et al. found that 17% of aural skills teacher survey respondents reported that they taught theory and aural skills in the same class; 14% reported that these subjects were in separate classes but covered the same material at the same time; 42% reported “some coordination” between the classes. Only the remaining 27% reported no explicit link between the classes (2020).

4 While the general organization is still apparent, this ordering is least clear in Jones/Shafel. This text also has the most difficult-to-follow organization, in part because it is challenging to find topics using the table of contents. For example, “Compound Meter” is listed in the table of contents as the second item under the Chapter 3 heading, but does not have a specific page number listed. Unhelpfully, Chapter 3 is listed as starting on page 103, but actually starts on page 83; Compound Meter is buried as a small heading near the bottom of page 91.

5 Kleppinger asks, “Is hearing the difference between French and German augmented sixths a lifelong listening habit that we want to spotlight? Does its priority represent the amount of time and reinforcement required to become proficient at mastering and later reinforcing this skill?” (2017, 158).

be an opportunity here for a textbook author to strike out in a different, even more perceptually oriented direction, and to establish a more independent version of aural skills, though such an author will likely need to contend with market realities that favor a more integrated approach.

Most of these textbooks hew to the traditional tasks of interval/chord identification, sight singing, and dictation—tasks that have long dominated aural skills instruction. Those that stick closest to these classic activities are Benward/Kolosick, Merritt/Castro, McCarthy/Turek, and Marcozzi. These textbooks will be the most straightforward for instructors who prefer—or are required—to teach in this traditional model. Among these, instructors may want to choose a text in part based on whether they prefer to have sight singing integrated into a single text, or to use a separate (perhaps more comprehensive) anthology alongside a more dictation-focused text. Other deciding factors might relate to unique features of a given book's pedagogy: McCarthy/Turek uses a "Schenkerian/voice-leading approach" to draw melodic connections among structural tones and is closely correlated with a music theory text, Merritt/Castro incorporates a significant amount of real music by composers of diverse identities (though centered around "classical" music), and Marcozzi includes the most significant error-detection exercises.

At the same time, other texts make significant strides in new directions. Horvit/Koozin/Nelson (hereafter Horvit/Koozin) still focuses on traditional activities like identification and dictation, but alongside contextual listening and error detection. Cleland/Dobrea-Grindahl notably emphasizes improvisation and includes intriguing text-based interludes on other aspects of musicianship, such as professionalism and musicality. Karpinski includes vocal chord arpeggiation, keyboard exercises such as progressions and sing-and-plays, patterns to internalize, and suggestions of familiar tunes to analyze. Karpinski also goes to the greatest lengths to incorporate insights from cognitive science, particularly evidenced by the care with which examples are planned to clearly convey tonic and meter while staying within the bounds of short-term memory. While these texts still have a significant dictation/sight-singing focus, these additional exercises may place these activities in a richer context.

Two textbooks go even further in de-emphasizing dictation. Jones/Shaftel focuses heavily on improvisation and the use of real music: acontextual identification is entirely absent, and dictation is given less space than examples of "real music." Phillips/Murphy centers entirely around contextual listening of real music, with more abstract ("Try It") exercises that are framed as preparation to sensitize students to salient aspects of the music. For instructors who wish to focus on holistic listening to

Author(s)	Title	Melodic Dictation	Harmonic Dictation	Rhythmic Dictation	Interval ID	Triad ID	Contextual Listening	Form	Post-Tonal	Keyboard/Sing-and-Play	Error Detection	Improvisation	Notes
Phillips/Murphy/ Marvin/Cleddinning	<i>The Musician's guide to Aural Skills: Ear Training</i>	☒	☒	☒	☒	☒	☒	☒	☒				Improvisation is in Sight Singing volume.
Benward/Kolosick	<i>Ear Training: A Technique for Listening</i>	☒	☒	☒	☒	☒	☒	☒			☒		
McCarthy/ Turek	<i>Singing and Dictation for Today's Musician</i>	☒	☒	☒	☒	☒		☒	☒	☒			Sing and plays in select chapters.
Cleland/ Dobrea- Grindahl	<i>Developing Musicianship Through Aural Skills: A Holistic Approach to Sight Singing and Ear Training</i>	☒	☒	☒	☒	☒			☒			☒	
Marcozzi	<i>Strategies and Patterns for Ear Training</i>	☒	☒	☒	☒	☒	☒				☒		
Jones/Shafrel/Chattah	<i>Aural Skills in Context: A Comprehensive Approach to Sight Singing, Ear Training, Harmony, and Improvisation</i>	☒	☒		☒		☒	☒		☒		☒	All examples are presented with harmonic context.
Karpinski	<i>Manual for Ear Training and Sight Singing</i>	☒	☒				☒		☒	☒			First ten chapters use pulse graphs and solfège (replacing notation)
Horvit/ Koozin/ Nelson	<i>Music for Ear Training</i>	☒	☒	☒	☒	☒	☒						
Merritt/ Castro	<i>Comprehensive Aural Skills: A Flexible Approach to Rhythm, Melody, and Harmony</i>	☒	☒	☒	☒								

Example 3.

Listening/ Integrated textbook exercise types.

real music, Phillips/Murphy is the more methodical and scaffolded of these two, and hews closely to the order and goals of a music theory curriculum. While Jones/Shaftel is less clearly organized, it also provides the most robust improvisational activities and is more clearly grounded in music-making.

Given the focus on listening, it is not surprising that these textbooks all come with access to online audio or, in one case, a CD. Of course, while the move to online/streaming means students and instructors can now access audio anywhere with an internet connection, this reliance on web-based materials comes with downsides. Fully half of these textbooks have online materials that were inaccessible at the time of this review.⁶ (Instructors frustrated by missing recordings may appreciate the public-domain excerpts for sight singing or dictation hosted at the open-access site trainedear.net, Mount 2020.) Where these materials work, they are mostly computer-generated piano sound files for interval/chord identification or dictation, either for students to use in outside-of-class practice, or for instructors who wish to use sound files instead of live performance in class. A few texts helpfully include a decent number of recordings in addition to computer-generated files (particularly Merritt/Castro, Karpinski, Phillips/Murphy, and Marcozzi), though the piano and to some extent voice and strings are still over-represented.

The most robust and diverse (operational) online materials are on Norton's InQuizitive platform, which is available in two different versions for Phillips/Murphy and Karpinski. These versions, both by Brent Yorgason, share some exercises, but are rearranged and customized to fit the organizations and emphases of these two very different texts. The platform uses a responsive model: students must receive a certain score to "pass" a level, and the number of points they gain or lose for each question is based on the level of confidence they report in their answer. As such, students with low confidence or lots of wrong answers will end up answering more questions than students with high confidence and right answers. The platform also tracks which kinds of questions students are having difficulty with. InQuizitive was not originally designed for music instruction, so certain exercises can feel awkward: for example,

6 These details are kept to a footnote in hopes that the materials will be fixed and this information will no longer be necessary. Jones/Shaftel's auralskillsincontext.com did not appear to exist, and the exercises tested on a mirror site required the unsupported Flash plugin. Horvit/Koozin's musicforeartraining.com led to an empty page. Benward/Kolosick's mhhe.com/et7 required the out-of-date Shockwave plugin, which cannot load on modern devices. Cleland/Dobrea-Grindahl's routledge.com/cw/Cleland stated that online materials intended to accompany the latest edition are "coming soon" in November 2021; the previous edition's materials were mostly operational at that link, but one tab required the Flash plugin.

some visual interfaces are picky, and individual questions sometimes vary widely in the amount of effort required. In addition, Norton's site only gives students a certain number of years to access online materials, which can cause problems for students who take longer to complete a curriculum. Nevertheless, the responsiveness to users' needs and LMS integration are attractive, and the fact that the platform is used by a major publisher for numerous textbooks in fields of study outside of music gives some confidence that it will not go defunct in short order.

These textbooks signal clear signs of a disconnect between aural skills pedagogy scholarship and teaching practice. In particular, Gary Karpinski made several proposals in the foundational pedagogy book *Aural Skills Acquisition* (2000) that have still not become mainstream. The first is to de-emphasize acontextual interval identification, since scale degrees are more closely tied to function, and "a preponderance of the evidence shows little connection between the ability to identify intervals acontextually and the ability to do so in a tonal context" (2000, 52). Yet as shown in Example 3, such drills are still common. Karpinski's second proposal is to give only a clef, the letter name of the key, and the bottom number of the time signature—and no aural clues—as prompts before dictations, so that students learn to find tonic, mode, and meter aurally (see Karpinski 2000, 92–98). Yet only Karpinski's own textbook and Cleland/Dobrea-Grindahl do so.

Scholarship on activities beyond the traditional identification, dictation, and sight singing also has yet to be fully incorporated. For example, contrasting error detection with dictation, Davis 2010 pointed out that "error detection is not just a preliminary skill. [. . .] Instead, error detection is an end goal in and of itself," suggesting that we should be spending significantly more time on this task (60). In the intervening years, no textbooks have added error detection, and those few with such activities (Benward/Kolosick and Marcozzi) have not made them more pedagogically sound or realistic.⁷ Similarly, Covington 1997 called improvisation an "imperative" for its value in synthesizing other skills—and because it is required by the National Association of Schools of Music. And yet, despite the value of improvisation in developing close listening, harmonic hearing, and more, only two listening textbooks (Cleland/Dobrea-Grindahl and Jones/Shafel) include substantial improvisational activities.

⁷ Davis identifies three textbooks with error-detection exercises; this review only identifies two, since Kraft 1999 is no longer generally available. Davis's suggestions include more carefully considering the role of harmonic and tonal context, contour vs. scale degree, and type of error (naturally occurring vs. planned and introduced by the instructor), as well as identifying errors in audio rather than in notation (since in rehearsals notated scores are typically considered the "correct" point of reference).

One particularly promising avenue for future textbook innovation would be to more explicitly teach the mechanisms and component skills that are foundational for aural skills. Dictation has long been criticized for its shortcomings as an instructional tool: both Klonoski 2006 and Karpinski 2000 pointed out that if we do not explicitly teach the many skills that are involved in dictation, some students will do well while others will flounder.⁸ For example, while McCarthy/Turek emphasizes the importance of being able to “hear the music you are reading in your head” (xxi), the text gives no advice on how to do so. Although Karpinski emphasizes that his textbook is “not simply a collection of items for mere testing” and instead conveys “*methods* by which students—through study and practice—will be able to improve their listening, reading, and performing skills” (xiv), there is limited advice on certain fundamental skills such as finding tonic, internal auditory imagery, and how to approach memory-related tasks. Future textbooks might facilitate success for more students if they focus even more on what Chenette 2021c calls “truly aural skills” and Klonoski 2000 calls “perceptual fundamentals.”

While the textbooks reviewed here claim to be about “aural skills,” they are arguably narrower, with a focus specifically on the concerns and priorities of the field of music theory. As such, these materials have many of the same priorities—and the same blind spots—as the field of music theory. These include an overwhelming focus on details of melody and harmony at the expense of rhythm, timbre, and form; and a clear basis in “Western Art Music” or “classical” repertoire and skills.

Yet music theorists do not have a monopoly on close listening, and there are other textbooks that approach aural skills from other perspectives. These tend to be smaller in scope and much more explicit about their subdisciplinary orientation, so they are unlikely to replace textbooks used in multi-semester, ostensibly subdiscipline-neutral aural skills sequences. Yet these “alternative aural skills” textbooks, listed in Example 4, may be appropriate to certain schools and programs, and they suggest the kinds of skills that a less music-theory-oriented curriculum might embrace.

While extensive reviews of each “alternative” book are outside the scope of this review, they are described here in brief. Radley, focused on learning to hear chord progressions, will likely look the most familiar to music theorists and is closest to the scope of the mainstream textbooks. It includes dictation and uses moveable-

8 For Klonoski, these skills are subvocalization, meter identification, key context (identifying tonic), hearing harmonic function in different textures in the context of progressions, tonal memory/chunking, and “extractive listening” (2006). Karpinski groups these skills into four “phases”—hearing, memory, understanding, and notation—though memory and understanding include multiple skills (2000, 64–91).

Author(s)	Title	Ed.	Year	Publisher	Price	Etext	Additional Materials
Ron Gorow	<i>Hearing and Writing Music: Professional Training for Today's Musician</i>	—	2006	September Publishing	36	unknown	None
Jerry Coker, Bob Knapp, and Larry Vincent	<i>Hearin' the Changes: Dealing with Unknown Tunes by Ear</i>	—	1997	Advance Music	28.95	130.5	None
Thom Mason	<i>Jazz Ears: Aural Skills for the Improvising Musician</i>	—	2021	Hal Leonard	24.99	108	www.halleonard.com/mylibrary has audio for practice and dictation.
Roberta Radley	<i>The "Real Easy" Ear Training Book: A Beginning/Intermediate Guide to Hearing the Chord Changes</i>	—	2008	Sher Music	34	80.95	Two accompanying CDs of audio of lesson examples and dictations.
Jason Corey	<i>Audio Production and Critical Listening: Technical Ear Training</i>	2nd	2017	Routledge	55.96	50	www.routledge.com/cw/corey links to software by David H. Benson to practice skills relevant to audio processing.

Example 4.

Alternative listening textbooks.

do solfège, though there are also “listen and look” exercises and “Stump the Band” group work that would work well as in-class activities. Coker/Knapp/Vincent shares this focus but avoids dictation, instead describing different approaches to harmonic progression in jazz and giving plenty of examples from real music. Mason includes dictation alongside many other exercises as it leads readers through hearing rhythms, articulations, melodies, intervals, chords, and structures to aid improvisation. Gorow assumes that the reader is pursuing a creative career but not necessarily a formal education, so it takes a holistic perspective on everything from solfège and the sounds of different intervals to copyright advice and writing lyrics; it also avoids notation altogether for the first half of the book. Corey focuses on skills needed by audio engineers, from timbre to effects and processing, and includes specialized software for students to experiment with these parameters.

Several of these books embrace the use of instruments, something largely absent from mainstream texts. Radley, for example, explicitly tells students that it is “not cheating” to use their instrument. Instructions often urge students to listen, imitate on their instruments, and then finally notate, though at certain points the student is urged to try tasks without their instruments. Gorow agrees that “if you are an instrumentalist, it is natural to mentally ‘play’ your instrument while listening, fingering each interval (in an arbitrary key)” (35). Though the Coker/Knapp/Vincent does not provide a lot of exercises, nearly all of them involve playing on either one’s

primary instrument or a keyboard. While some instructors incorporate instruments into their teaching, it is notable that the mainstream textbooks reviewed here do not explicitly provide exercises for instruments beyond the voice and occasionally the keyboard.⁹ A thoughtful incorporation of instruments and/or instrument-based kinesthetic imagery into the classroom might give mainstream students more effective tools for visualization while inviting application outside of the classroom.

Anthologies of Melodies and Rhythms

Alongside integrated singing and ear training texts, many textbooks are devoted exclusively to singing and essentially serve as anthologies of melodies and rhythms (see Example 5). The titles of these books suggest a focus on sight singing, thus reflecting the way that skill has been paired with dictation to serve as the pillars of a conventional aural skills curriculum.

The authors of these texts propose that sight singing is essential to musicianship and suggest two main benefits of this skill. First, there is the skill itself, which Benjamin/Horvit/Koozin/Nelson (hereafter Benjamin/Horvit) describes as translating “symbol into sound with speed and precision” (xii). Second, some authors suggest that sight singing is valuable in developing internal hearing, as when Carr/Benward state that “sight singing is one of the most practical means that students have of demonstrating to their instructors the progress they are making in ‘hearing’ the notation they are ‘seeing’” (xi). While these two purposes are often conflated, they may call for different pedagogical approaches. For example, building internal hearing may require multiple passes through a passage, though as Nancy Rogers points out, “we can truly sight sing a melody only once” (x).

Just as with dictation, we must more fully examine and articulate why sight singing is treated as the essential performance-related aural skill, which specific skills are developed and demonstrated through that activity, and how those skills are indicative of or transfer to related performance/listening skills. For instance, sight singing requires reading music notation fluently, developing good eye movement habits, assigning solfège syllables to interpret tonal context, decoding patterns of rhythmic durations within the context of a given metric structure, and simultaneously processing pitch, rhythm, tempo, and other expressive features as the melody progresses in the moment of performance. Students’ fundamental vocal production

9 Even keyboard exercises are surprisingly rare in the mainstream texts, given that keyboard skills are a standard component of music curricula. They are prominent only in Jones/Shaftel, McCarthy/Turek, and Karpinski.

Author(s)	Title	Ed.	Year	Publisher	Price	Etext	Additional Materials
Thomas Benjamin, Michael Horvit, Timothy Koozin, and Robert Nelson	<i>Music for Sight Singing</i>	7th	2022	Cengage	65.99	40.99	None
Sol Berkowitz, Gabriel Frontrier, Leo Kraft, Perry Goldstein, and Edward Smaldone	<i>A New Approach to Sight Singing</i>	6th	2017	Norton	111.87	—	None
Maureen Carr, Bruce Benward, Taylor Greer, Eric McKee, and Phillip Torbert	<i>Sight Singing Complete</i>	8th	2015	McGraw Hill	c. 20.00–123.00*	—	None
Gary S. Karpinski and Richard Kram	<i>Anthology for Sight Singing</i>	2nd	2017	Norton	110.62	—	Companion online index for searching all melodies within anthology by specific characteristics or topics.
Carol Krueger	<i>Progressive Sight Singing</i>	3rd	2017	Oxford	149.99	—	Companion website with exercises, flashcards, worksheets, audio recordings, etc.
Joel Phillips, Paul Murphy, Elizabeth West Marvin, and Jane Piper Clendinning	The Musician's Guide to Aural Skills: Sight-Singing	4th	2021	Norton	101.25	—	None
Nancy Rogers and Robert Ottman	Music for Sight Singing	10th	2019	Pearson	90.66	9.99/month, with minimum 4-month subscription	Online rhythm generator software allows students to set various parameters to produce new notated rhythmic patterns.
Anne Carothers Hall and Timothy Paul Urban	Studying Rhythm	4th	2019	Pearson	69.32	9.99/month, with minimum 4-month subscription	None
Daniel Kazez	Rhythm Reading	2nd	1997	Norton	51.83	—	None

*Sight Singing Complete is not currently available from its publisher. This price range reflects resale values at amazon.com.

Example 5.

Anthologies of melodies and rhythms.

skills are also an important factor, whether that singing is prepared or unprepared. Although it might indeed be “practical” to use sight singing to demonstrate inner hearing, errors in a sight-sung melody often reflect vocal production weaknesses relative to pitch matching or the vocal mechanism, rather than an inability to audiate a melody and/or develop a “hearing eye.” It is therefore crucial to consider the benefits and drawbacks of using assessments of sight singing as the only (or main) indicator of internal hearing abilities.

Many textbooks and instructors seem to conflate sight singing and prepared singing. Book titles tend only to reference sight singing, but their contents often include recommendations for practicing and activities that require preparation. This suggests that “sight singing” is sometimes stripped of its specific reference to singing a melody for the first time and instead used more generally to refer to all performance-related aspects of the aural skills class. It would therefore be helpful to use this term more carefully in both our textbooks and our classes as we identify specific desired pedagogical outcomes and recognize the ways in which different types of activities aid skill development.

Within this context of multiple performance-related skills, anthologies give instructors flexibility to not only incorporate melodies and rhythms into their classes in diverse ways, but also vary how student skills are assessed, depending on the intended learning objectives. For instance, prepared singing could be effective in helping students recognize and internalize characteristic pitch and rhythmic patterns (“chunks”) that build a musical vocabulary. True sight reading then assesses their ability to recognize those chunks and fluently sing a new melody on the first attempt. Sight singing might also assess students’ development of specific sight-reading skills, like eye movements.¹⁰

It is common for singing anthologies to consist entirely of collections of melodies and rhythms, without much explanatory text or instruction. Prefaces provide information about the purpose, content, and organization of the book, and some authors include general suggestions for singing and practice. Otherwise, text tends to be limited to brief comments at the beginning of chapters that introduce new skills. Examples of such texts are Berkowitz/Fontrier/Kraft/Goldstein/Smaldone (hereafter Berkowitz/Fontrier), Benjamin/Horvit, Krueger, and Rogers/Ottman. The Karpinski/Kram anthology is also mostly devoid of text, other than occasional questions posed before melodies to draw students’ attention to certain characteristics. Explanations are instead found in Karpinski’s *Manual for Ear Training and Sight Singing*, which coordinates with the singing anthology and contains the guidance and step-by-step instructions that should be applied to its melodies.

Other singing textbooks combine the spirit of a melody/rhythm anthology with a variety of performance activities, thus reinforcing the notion that these books are not actually intended just for sight singing (see Example 6 for a comparison of activities across textbooks). These texts also tend to contain more explanatory

¹⁰ Shaffer 2013, on “improving sight singing without sight singing,” provides interesting insights about the relationship between prepared singing and sight singing.

Author(s)	Title	Preparatory exercises	Rhythmic patterns	Melodies	Duets and other ensembles	Keyboard exercises	Sing and play	Improvisation
Phillips/Murphy/Marvin/ Clendinning	<i>The Musician's Guide to Aural Skills: Ear Training</i>	✓	✓	✓	✓	✓	✓	✓
Carr/Benward/Greer/ McKee/Torbert	<i>Sight Singing Complete</i>	✓	✓	✓	✓		✓	✓
Benjamin/Horvit/Koozin/ Nelson	<i>Music for Sight Singing</i>	✓	✓	✓	✓		✓	
Rogers/Ottman	<i>Music for Sight Singing</i>		✓	✓	✓			✓
Berkowitz/Frontrier/Kraft/ Goldstein/Smaldone	<i>A New Approach to Sight Singing</i>		✓	✓	✓		✓	
Krueger	<i>Progressive Sight Singing</i>	✓	✓	✓	✓			
Karpinski/Kram	<i>Anthology for Sight Singing</i>		✓	✓	✓			
Hall/Urban	<i>Studying Rhythm</i>	✓	✓		✓			✓
Kazez	<i>Rhythm Reading</i>		✓		✓			

Example 6.

Types of activities in singing anthologies.

text. For example, the Phillips/Murphy weaves melodies for sight singing among other activities that emphasize “skills integration,” which the authors describe as “the ability to imagine and perform the sounds of printed music; to recall music by singing, playing, and writing it; and to improvise and create new music in a variety of styles” (viii). Brief instructions are provided throughout the text to introduce singing, conducting, keyboard playing, improvisation, and composition activities, which either isolate individual skills or combine multiple skills in the same activity (e.g., “sing and play” and “point and play”). This text also emphasizes the importance of collaboration by providing opportunities to perform multi-part works and offering instructions for evaluating peer performances and compositions.

“Sing and play” activities are also found in Benjamin/Horvit and Berkowitz/Fontrier. Such activities invite students to sing melodies while simultaneously playing bass lines, block chords, complementary melodies, or other accompanimental parts at the piano. Chenette 2021b suggests three possible purposes for incorporating the

keyboard into aural skills: “learning the general ‘sound’ of the harmony paradigms (and perhaps linking this to a kinesthetic ‘feel’), understanding/hearing/visualizing the relationship between melody and harmony, and requiring the student to think in independent musical ‘streams.’” Berkowitz/Fontrier highlights that the “sing and play” activities in their text model a “real” musical context by having students “hear and demonstrate an understanding of coordinated rhythmic and harmonic relationships” (331). In addition, they propose that the harmonic context provided by keyboard accompaniments can improve vocal intonation.

Although keyboard-related tasks are useful in developing a variety of performance-related skills, they rely on substantial coordination between aural skills and keyboard curricula. Without such alignment, students might encounter aspects of melodic singing in aural skills prior to acquiring the necessary skills to accompany that singing at the keyboard. Although Benjamin/Horvit accommodates this by suggesting that accompaniments could be provided by the instructor or a classmate, that produces a different experience and set of benefits, since each student is not simultaneously singing and playing.

Improvisation is also featured in several anthologies, notably to a greater degree than in the listening-focused texts. For instance, the “art of improvisation” is one of the three main principles in the Carr/Benward anthology, where focus is placed on improvising both within the context of previously learned rhythmic/melodic patterns and along with provided bass lines/harmonic progressions. This type of “structured improvisation” is also included in nearly every chapter of Rogers/Ottman and in Urban/Hall’s rhythm-only text. Rogers points out that, unlike sight singing, improvisation activities benefit from repetition, since the same melodic or rhythmic prompts can yield multiple effective and imaginative “solutions” (24). Improvisation is also a significant component of Phillips/Murphy, which includes a variety of activities geared toward improvisation in solo singing, ensemble singing, and keyboard playing.

While the very nature of an anthology foregrounds notation, embracing improvisation is a good start towards placing greater emphasis on purely aural skills. For instance, improvisation could more frequently be performed in response to an aural stimulus rather than always from a notated prompt. Other aural-only activities could also be incorporated into these textbooks. Krueger, for example, begins many chapters with a section titled “Building Aural/Oral Skills” that introduces terms/concepts and provides instructions for aural activities, which typically center around tapping/conducting the beat while listening or echoing/continuing examples performed by the instructor using rhythm syllables, solfège, and/or hand signs. The elements are then

shown in music notation in the subsequent “Symbolic Association” sections.

Organization of these singing anthologies parallels that of the ear-training texts, with the sequence of topics following a typical four-semester music theory curriculum. This is particularly evident in singing texts that are coordinated with a written theory and/or ear training text (Benjamin/Horvit and Phillips/Murphy), but is also true of those that have no specified companion. As mentioned in the review of ear-training textbooks, this structural approach is advantageous when written theory and aural skills curricula are aligned across separate courses or taught within the same classes. As with the listening/dictation texts, coordinating the pacing and organization of theory and aural skills can be problematic.

In general, melodies in the anthologies are categorized and sequenced according to a relatively consistent set of criteria. These include mode (major vs. minor), interval size (conjunct vs. disjunct), harmonic context of interval skips (tonic triad, dominant triad, other diatonic chords, etc.), diatonic melodies preceding chromatic and modulating melodies, and a predominance of tonal melodies with limited inclusion of modal, pentatonic, octatonic, and atonal melodies. Most texts contain a substantially greater number of major melodies than minor. In addition, most begin with stepwise major melodies, then introduce skips within the tonic triad. Only after that are minor melodies introduced, typically immediately including skips. The implicit assumption is that facility with singing in major automatically translates to minor, without needing the focus and time on scalar fundamentals. Berkowitz/Fontrier and Carr/Benward differ by including major and minor melodies together from the opening chapters. Phillips/Murphy is also distinct in that it introduces modal melodies in Part 1, rather than adopting the more typical approach of waiting until later chapters for post-tonal and atonal melodies.

Rhythm-only exercises are usually sequenced according to meter type (simple before compound), time signature (quarter and dotted-quarter note beats before other beat units), rhythmic complexity (moving from beat, to division, to subdivision), then syncopation, borrowed divisions, asymmetrical meters, mixed meters, and other more advanced characteristics. Within his rhythm-only text, Kazez provides extensive suggestions for both teaching and practice within his preface. For example, he emphasizes the concept of sound before sight (borrowed from Carl Orff and Zoltàn Kodály) to encourage echoing activities that focus on performing rhythms prior to reading them in notation. He also provides numerous performing options, including singing on a neutral syllable, singing the alphabet, using speech cues, conducting, partner and whole-class activities, guided pitch improvisations while performing rhythms, and combinations of singing and kinesthetic activities (walking, hopping, moving hands, etc.).

Another consideration with any anthology is the origin of its rhythms and melodies. It is most common for rhythm-only exercises to be composed for that text rather than drawn from the literature. One exception is Karpinski/Kram, whose rhythm examples are all taken from previously composed pieces. But as with the pedagogically composed rhythm exercises in other texts, all of those examples are notated without pitch. While both rhythm-only books include examples from literature, Kazez is the only text that fully notates them, with pitch, rhythm, dynamics, articulations, etc.

The melodies in each text are also either newly composed or drawn from the literature. Benjamin/Horvit predominantly contains melodies composed by the authors that “isolate the particular musical devices under study” and are “carefully graded and cumulative” (viii). Only 3 of the 26 units of the book (approximately 20% of its total pages) contain music from literature.¹¹ In contrast, Karpinski/Kram exclusively contains melodies from various repertoires. All other anthologies favor melodies from existing pieces along with a smaller number of pedagogically composed melodies that introduce new melodic characteristics. In advocating for this approach, Nancy Rogers argues that “not only is ‘real music’ more enjoyable and interesting to sing than dry exercises, but genuine repertoire naturally introduces a host of important musical considerations beyond pitch and rhythm (including dynamics, accents, articulations, slurs, repeat signs, and tempo markings” (x). Students should therefore be encouraged to sing all aspects of a melody, thereby creating experiences in the aural skills classroom that more closely mimic those of other music performance settings. In addition, instructors should remain mindful of the value of designing assessment rubrics that account for more than just correct pitches and rhythmic durations, in which “emphasis should be placed on both accuracy and musicality of performance” (Benjamin/Horvit, xi).

Approaching both prepared and unprepared singing as real performing experiences also reinforces the importance of how melodies are notated within these textbooks, where most are careful to include markings for tempo, dynamics, articulation, etc. Phillips/Murphy is noteworthy in that it also includes expressive markings in its preparatory exercises, etudes, and rhythm-only examples. Karpinski/Kram extends this even further by having an emphasis on the original “look” of each melody as one of their guiding principles. In order to expose students to the variety of music they will encounter in other performance settings, “all excerpts retain their original tempo marks, dynamics, articulation, phrasing, beaming (where possible), lyrics, and so

¹¹ Although the overall number of literature examples is smaller in Benjamin/Horvit, they tend to be longer excerpts than in other books and are sometimes complete short pieces.

forth).” This also includes maintaining the original key of a melody (thereby requiring students to sometimes encounter music with extensive ledger lines), preserving the different beaming conventions that occur in instrumental and vocal music, and including grace notes, trills, and other ornaments (even if instructors recommend that students omit them when singing). As the authors summarize, “no attempt has been made to standardize” notational conventions, and “every excerpt appears as it does in its original context” (xii).

Another notational consideration is the extent to which melodies are annotated with analytical information. Of the textbooks under consideration, Berkowitz/Fontrier is the only one that frequently labels melodies with Roman numerals to indicate underlying harmonic implications. This could draw students’ attention to larger-scale characteristics that aid in chunking and sight reading (e.g., harmonic rhythm, chord arpeggiations, decorative non-harmonic tones, etc.). In addition, the authors recommend that students play those harmonies as block chords at the keyboard while singing (or at least play roots of the indicated triads to have a harmonic reference point, if keyboard skills are limited). This provides an effective introduction to the “sing and play” exercises included in this text, reinforces the author’s “conviction that the piano is essential in developing musicianship,” and provides students with opportunities to “improve musical independence while also developing good intonation and sharpening rhythmic skills” (viii). Other instructors might prefer to guide students in developing similar skills by inviting them to analyze harmonic implications themselves, rather than having them already provided in the textbook.

Authors of anthologies should also consider issues of attribution when incorporating excerpts from the literature into their texts. Within singing anthologies, it is common for folk melodies to be identified solely by country, without even song title (Rogers/Ottman, Krueger, Berkowitz/Fontrier). Other texts provide both country and title for folk songs (Karpinski/Kram, Phillips/Murphy) and most provide composer, title, and movement for pieces drawn from the literature. Karpinski/Kram provides the greatest amount of information about each melody, and their preface reflects this prioritization of attribution by including extensive comments about their choice of source scores and their approach to indicating composer, title, movement, section, measure numbers, completion/revision dates, opus/catalog numbers, and countries of origin.

Although singing anthologies tend to include less explanatory text than ear-training texts, they still often include guidance relative to practice approaches and singing strategies. For instance, Benjamin/Horvit strongly recommends that students

conduct all exercises as a means of orienting toward meter, and to eventually “go beyond mere ‘time-beating’ to introduce, model, and practice the more contextual aspects of conducting, as this will ensure more accurate and musical performances” (xi). Conducting can also play an important role in the sight-singing experience, since it encourages students to select an appropriate tempo and maintain a steady beat as they learn to sight read with continuity and resist the urge to stop and correct errors. Instructors and students must also consider the range and register of each melody, particularly when the included melodies are notated in a variety of clefs and keys. Some authors explicitly instruct students to transpose as necessary so that they can perform in a comfortable register, thereby emphasizing relationships between pitches in a key (reinforced with the use of a moveable solfège system) rather than the absolute pitch or key of a notated melody. Although the singing textbooks under review tend not to advocate for the use of any particular pitch labeling system, all highlight the importance of choosing a solfège/number system and using it consistently in order to develop the ability to immediately interpret the tonal context of each pitch.

Like the ear-training texts, some of the singing anthologies have companion websites. The most recent edition of Rogers/Ottman offers an online resource called the *Rhythm Generator*, which allows students to vary parameters like beat note, time signature, length, number of parts, and difficulty level in order to generate endless notated rhythmic patterns for practice and performance. Karpinski/Kram’s accompanying website is searchable by various criteria (e.g., clef, range, mode, rhythmic durations, skips from certain diatonic chords, etc.), allowing instructors the flexibility to locate melodies within the anthology that might accompany a course organization that differs from the layout of the chapters within the book. Krueger’s anthology has a companion website that includes additional exercises, flash cards, worksheets, audio recordings of melodies/rhythms, and solutions to certain exercises from the printed textbook.

Commercial Software

In contrast to printed materials discussed in the previous sections, the commercial aural skills software surveyed here is—for the most part—designed to supplement classroom curricula. Standing alongside these packages are largely-free online aural skills activities offered at numerous web sites such as teoria.com and musictheory.net.

The market for commercial aural skills software is more crowded with robust options than ever before. Recent surveys by Chenette et al. (2020) and Murphy and

Software	Publisher	Web Address	Pedagogical Focus
Auralia	Rising Software	www.risingsoftware.com/auralia	Aural skills only
Artusi/MacGAMUT*	Artusi	artusimusic.com	Aural skills and music theory instruction
EarMaster	EarMaster ApS	earmaster.com	Aural skills only
Picardy	Picardy Learning	picardylearning.com	Aural skills and music theory instruction
Practica Musica	Ars Nova Software	www.ars-nova.com/practica7.html	Aural skills and music theory instruction

*Artusi absorbed the content of the venerable MacGAMUT in 2022.

Example 7. Popular commercial aural skills software.

McConville (2017) suggest that popular options include those shown in Example 7. This healthy set of choices will form the focus of the discussion below, but the internet is studded with other options: a search using the phrase “aural skills practice” brings up over 2.4 million results; offerings near the top of the list include sites like tonegym.co, thetamusic.com, tonedear.com, earbeater.com, etc.—to say nothing of the numerous instructional videos available on sites like YouTube. The mere existence of this enormous number of options testifies to the explosion of innovation in this area.¹²

The question that every instructor considering any of these packages for their students must ask is what benefit a particular package provides, and whether that benefit is worth the cost as measured in students’ time, effort, and money. This survey of available products, therefore, keenly encourages readers to ask that question as they weigh these options against each other and against the option of not using any of them. By embracing one of these programs as an essential part of a larger curriculum, the instructor is declaring that *these* aural skills activities, configured and delivered in this way, will be better for students’ inner-ear development than other activities outside the classroom to which they could reasonably be expected to devote their limited time and energy.

With this perspective in mind, there are two significant issues to consider:

1. What aural skills should students take away from the aural skills curriculum

¹² Adjacent to all these electronic resources is *other* software with possible applications to aural skills pedagogy, such as Harmonia (which is chiefly designed for assessing part-writing, figured bass, and harmonic analysis, but can also be reverse-engineered to create dictation exercises) or SmartMusic (which can be configured to record and assess students’ efforts to sing melodies, whether prepared or at sight). Notably, SmartMusic has responded to interest from music theory instructors by adding to their library a graded collection of aural skills exercises by Cynthia Gonzales.

- and the aural skills course in question, and to what extent do the activities provided in this package encourage the development of those skills; and
2. In what ways does a given technological interface enhance or interfere with the development of these skills?

This section is structured around those two questions: how the activities provided by this software promote the skills we want students to have, and how the presentation of those activities as software affects their impact.

One might begin to address the first question by noting that all five of the commercial options named above reflect the kinds of aural-stimulus-based activities commonly emphasized in classrooms: identifying isolated intervals and chords, melodic and harmonic dictation, and so on. In addition, EarMaster and Auralia use internal microphones that are now ubiquitous in computers and tablets to assess performances of melodic intervals, rhythms, melodies, and the like.

The ways in which these typical aural skills activities manifest in each package vary widely, to the point where it is impossible to explore them all in the context of this omnibus review. Instead, this section will focus on one type of activity—melodic dictation. As noted above, melodic dictation is easily one of the most common activities in current aural skills curricula, so it is no surprise to find it represented across the entire spectrum of software offerings. Tracking the details of its manifestations across that spectrum allows for a broad perspective of the current aural skills software market, and its connections to the state of aural skills pedagogy, to emerge.¹³

Simply cataloging the melodic-dictation contents of the five packages of Example 7 demonstrates a variety of approaches. Artusi's "Introduction to Melodic Dictation" is organized into four levels of difficulty, each of which begins with multiple-choice, error-detection, and error-correction exercises before graduating to full-blown transcriptions.¹⁴ Practica Musica features "Melodic pitch" and "Melodic pitch + rhythm" modules that also begin with error detection and emphasize randomly generated pitch patterns that can be constrained in various ways (length, range, diatonic vs. chromatic, etc.) to limit difficulty. EarMaster also uses randomly generated melodies of increasing length and complexity, with the option for libraries of pre-composed melodies to be added by instructors. Auralia presents 25 "levels" of melodic dictation that range from two-bar, C-major "melodies" using only B, C, and D to eight-measure minor-mode tunes

¹³ This is to say nothing about questioning the centrality of melodic dictation itself in aural skills pedagogy. As noted elsewhere in this review, that position is worth questioning.

¹⁴ MacGAMUT's dictation materials, which exist alongside Artusi's, follow their own progressive design.

“largely drawn from well-known repertoire” that make use of “stepwise motion and leaps, some chromaticism, and moderate rhythmic complexity.” Finally, Picardy uses a library of several hundred melodies, composed specifically for dictation, organized into twelve sequential “courses” that gradually increase in difficulty.

Each package offers opportunities for instructors to customize the content and ordering of activities presented to students. With that in mind, weighing these programs against one another should include consideration of each option's "defaults." Do I want the main sources of melodic content to be randomly generated, composed for dictation, or derived from real-world music? Will I want to import my own dictation materials into the program's ecosystem for students to use, and how much work will it be to do so? Do melodic-dictation-adjacent activities (like error detection and correction) support the outcomes I want for my students, and if so, how robustly are they represented here? Teachers should be at least as familiar with the dictation materials used outside the classroom as inside—perhaps more so, since there is no opportunity to provide strategies or point out the professional relevance of these activities as students attempt them. Assigning any component from these programs without exploring it first, and then customizing it as necessary to best reflect outcomes that component is meant to encourage, is to court students' frustration and cynicism about the program's value.

To observe how crucial it is to get into the weeds of specific exercises offered by these programs, consider the capability offered by Practica Musica and EarMaster to generate melodies randomly for dictation. The potential for infinitely varied practice is attractive, perhaps, but without interventions by the instructor, a given random melody may not necessarily project a sense of traditional tonality or the specified time signature. Example 8 shows a typical melody created by Practica Musica in the “syncopation, keys, ledgers” level of melodic dictation.



Example 8.
A “syncopated” melody “in B $\flat$ ” generated by Practica Musica.

Practica Musica does not provide key-establishing or meter-establishing cues before playing dictation exercises, and in fact starts the first hearing the moment a window opens for a dictation. In this sense, it follows the advice of Karpinski 2000 in placing the onus on the student for building tonal and metrical contexts. Such a

lack of context cues prior to the dictation is another factor that demands instructors' consideration—if this approach does not reflect common classroom practice, they should expect some befuddlement or consternation from students. Even so, in no scenario would we expect (or desire) a student to hear this stimulus and, absent any context, place it in either triple meter or in B♭ major—yet both assumptions are required in order to complete this dictation correctly.¹⁵

Both *Practica Musica* and *EarMaster* include effective options for generating melodies that are more tonally idiomatic. *Practica Musica*'s settings include “attempt to imply harmony,” “start on tonic,” and, contrarily, “use unfocused randomness.” *EarMaster* offers the choice to require melodies to end on a member of the tonic triad or on $\hat{1}$ exclusively, and to specify the exercise's largest melodic interval size or overall ambitus. Similarly, instructors can skip the module of *Practica Musica* that created this non-contextualized syncopation if they find it problematic. But this vignette illustrates how essential it is for aural skills teachers to delve deeply into any activity from any software package before expecting students to attempt it, and to be willing to negotiate the distances between the perspectives represented in the software and their own.

The above focus upon melodic dictation highlights just one facet of the potential for friction between what we might want students to take away from aural skills and what aural skills software emphasizes. Others might not share the quibbles suggested in the narrative above, or may deliberately choose to look past such shortcomings, or strive to overcome them by customizing the settings and the melodies (as allowed in particular applications) experienced by their students. There are also educational contexts in which a teacher may not want to integrate one of these pieces of software as a required component for a course, but instead point a struggling student to selected material for additional practice—in that case, pedagogical or philosophical differences with the program's presuppositions matter much less. But in every situation, instructors must be aware that any aural skills software (and any implementation of it) espouses pedagogical values, however tacitly. Recognizing and responding to them must inform the decision to direct students to that software.

Aspects of each program's pedagogical perspectives can be gleaned by surveying the kinds of activities (aside from melodic dictation) it provides. *Auralia* offers the

¹⁵ It is worth emphasizing that this melody was generated in a dictation level that explicitly makes use of syncopation. But there is a crucial difference between the identification and experience of syncopation (i.e., phenomenal accent in weak metrical positions) and notating music in a time signature that is simply at odds with its perceived metrical structure. This distinction is both essential and elementary for students to learn, and should inform the pedagogy of rhythm and meter. See Kleppinger 2020 and Cohn 2015.

greatest variety of exercises, from two-part dictations and singing in counterpoint with a given melody to identification (in separate modules) of meter, contour, dynamics, cadences, composers (from a library of canonical works), simple forms, and many more. EarMaster is a distant second in this regard, though it stands out in its emphasis on jazz, demonstrated by its units devoted to jazz harmony and to melodic and rhythmic dictation in that idiom. EarMaster and Auralia both feature modules that ask users to sing melodies or clap rhythms after hearing them performed (without notating them). By contrast, Artusi, Picardy, and Practica Musica are more conservative in their offerings, focusing on aural identification of intervals and chords, and on rhythmic, harmonic, and melodic dictation. This difference is perhaps related to these packages' offerings of instruction and drill in traditional music theory topics alongside the aural skills content—which in turn reflects the common linkage in post-secondary music curricula between “written” music theory and aural skills courses.

Even if some packages present more kinds of exercises overall than others, variety abounds across them all. Auralia and Practica Musica include practice in identifying isolated, single tones, purportedly to develop absolute pitch. Practica Musica also features multiple-choice problems in which a melody is played and students select the notation that uses the correct *rhythm*. In EarMaster, users can practice rhythmic error detection by clicking on notation where it does not match the played rhythm. Picardy offers drills in which students aurally identify, from multiple-choice options, the (moveable-do) solfège of short, unmeasured melodic segments. Artusi's “Same or different melodies” challenges listeners, without access to notation, to decide whether successive performances of a given tune are identical or not. And so on: the myriad methods for getting students to think about and identify what they hear, across all these platforms, are inspiring when considered in their totality.

Perhaps inevitably, the interfaces for each of these products offer friction that stands between the student and the mastery of the skill being practiced and assessed—or, at the least, between the student and their demonstration of that mastery. Sometimes that resistance is negligible or easy to ignore, but every interface occasionally inflicts momentary confusion about how to provide on-screen responses. Take melodic dictation: do I click a line or space on the staff and then select a rhythmic value, or do I drag a rhythm to its position on the staff? How do I add (or remove) an augmentation dot or a tie? Can I replace a note in the middle of a measure I've otherwise completed without deleting and re-entering all the other notes after it? These questions fade somewhat as students become entrained to a particular interface, but even then, the background frustration of “what an awkward way to enter this note” can linger as a

distraction from the musical task at hand. Even navigation is sometimes mysterious in frustrating ways. In Artusi, clicking to see the software's instructions for entering roman numerals in harmonic dictation leaves your exercise unfinished with no return. Exiting a particular training mode in Practica Musica (in the Mac version, at least) requires clicking on the red button in the upper left corner that, in any other standard context, instead closes the entire application.

Example 9 illustrates the problem of interface friction in Practica Musica (though the issue is in no way unique to this package). On the top is the melody of Example 8; on the bottom is a response. The response has only a single incorrect rhythmic value, at the end of m. 1 (caused by fussing around with Practica Musica's interface to figure out how to notate a tie across a bar line). Yet the red markings indicate that Practica Musica has flagged the first bar line and the final three notes—all of which are correct according to pitch, rhythm, and notated metrical placement—as errors. This distance between a student's level of mastery of a particular exercise and the assessment of it is a pernicious problem, as described by Karpinski 2000 and Kleppinger 2017.



Example 9.

A notated response to the melody in Example 8, showing Practica Musica's assessment.

The *order* in which elements of a dictation must be entered into the graphical interface is at odds with commonly taught strategies for dictation (and, at a more fundamental level, with structural listening). Every piece of software reviewed here that asks users to click or drag the pitches they hear onto a staff on a screen requires them to do so in sequence—from the first note of the dictation to the last, or (at best) from the first note of a given measure to the last. Contrast that requirement with the valuable strategies students typically receive for such dictations in the classroom, which favor locating and notating structural tones, long rhythmic values, melodic apices, etc., and then stitching those events together (perhaps with protonotation) by decoding faster scalar or arpeggiating passages. Working from beginning to end, one note at a time, is both inefficient and disconnected from typical musical experience. It is also, maddeningly,

a habit that generations of aural-skills teachers have worked to excise. In light of these circumstances, it is somewhat jarring to think that students might be directed, by those very instructors, to an interface that all but demands this unproductive, front-to-back thinking.

Picardy uniquely dodges many of these interface issues by asking users to complete their work on a piece of staff paper. When they're done listening, Picardy asks a series of multiple-choice prose questions about the melody's solfège content and harmonic underpinnings at particular moments, rhythm in specific measures, and so on—questions that all but demand an accurate transcription of the melody to answer correctly.

Anyone intending to consider students' work in these applications as part of a larger course grade has to deal with the issue of assessment integrity. This is perhaps a “meta-interface” issue, in that it manifests the moment students interact with aural skills software on their own time and devices—at that point, the instructor relinquishes much awareness and control of the methods by which students complete an exercise.

Placing this problem in the context of melodic dictation (once more) is illustrative. Most software does not limit the number of hearings provided or the time between them, and in no case is a user prevented from using a keyboard (or another instrument) while working. EarMaster even includes a playable keyboard on the screen during dictation work. Of course, when melodic dictation is practiced or assessed in classroom settings, hearings are limited (by necessity, if nothing else) and resources like keyboards are unavailable. This is not necessarily a bad thing, and in fact such experience with *transcription* is potentially useful, with meaningful transfer to other skills (including dictation). But transcription activities are not identical to dictation activities, and they train different (if overlapping) skill sets.¹⁶

To be sure, there are legitimate pedagogical frameworks in which this is not a real concern. If a struggling student is simply using the software for additional practice at the teacher's suggestion, or if the curricular philosophy surrounding melodic dictation doesn't hinge on transcription's distinctiveness as carved out above, then there is nothing to worry about. However, in the common context wherein work done using aural skills software is scored and integrated into students' overall class grades, it is simply naïve to assume that “melodic dictation” activities assigned in that software

¹⁶ Karpinski 2000 points out that “numerous or unlimited playings take dictation into the realm of *transcription*, which—although similar to dictation—does not require listeners to develop musical memory in the same ways or to the same level that dictation does” (98). Karpinski's discussion of transcription's benefits is also relevant (2000, 128–29).

are completed under the same constraints as melodic dictation in an exam setting. This essential observation holds for many other traditional kinds of dictation (harmonic, rhythmic, contrapuntal, etc.) and for chord, scale, and interval identification. It also applies to singing activities: clever students can connect headphones to a keyboard instrument and play along with themselves while singing, thus staying on pitch without any ambient sound from the keyboard.¹⁷ If we choose to ascribe weight to the scores earned, or the number of modules completed, in such unsupervised settings, then we must acknowledge the potential for differences among the kinds of aids our students employ while completing the activities—and also for divergence from how those same kinds of activities happen in the classroom.

Perhaps the best advice to offer in this sweeping, high-altitude review of current aural skills products is this: before expecting students to work with any particular module or activity in any particular package, take the time to try several exercises yourself. While doing so, be cognizant of both the relevance of your own mental processing of the exercises to the kinds of musical thinking you want to encourage in students, and of the level of distraction from that processing offered by your engagement with the software's interface. Keep in mind, of course, that students naturally are less adept at the skills being built and tested, and are therefore more vulnerable to feelings of frustration and futility when they do not recognize the musical utility of a challenging exercise, or have to wrestle too strenuously with the technology itself in order to improve and demonstrate their abilities. Curricular goals should be measured according to the development of carefully selected, musically relevant aural skills rather than through completion of particular units or modules in any software. That software (and the ways in which it is used) may at times align helpfully with the outcomes we desire for our students, but as curricular designers we must take care that the cart not be allowed to drive the horse.

Repertoire

Aural skills pedagogy is plagued by the same legacies of Eurocentrism, white supremacy, and patriarchy found in music theory (and many other fields). Music by

¹⁷ To be clear, this is not meant to assume aural skills students have nefarious intent. We are generally optimistic about our students' desire to be successful and honorable in their musical studies (our pedagogical introspections, reflected in this very essay, testify to that posture). At the same time, it is crucial to recognize that students who struggle with aural skills, or are otherwise personally situated in such a way that shortcuts to higher scores in these courses become attractive, will sometimes seek out those shortcuts.

white, male, European composers is overrepresented in textbooks and anthologies. Skills associated with white music-making, and particularly skills that involve staff notation, are prioritized over other skills like improvisation. While this clearly will not solve all of these problems, it is laudable that many textbook authors and publishers have begun more fully considering the importance of diversity among the examples represented in their textbooks. These goals have been achieved to differing extents.

Several authors have tried in recent years to increase the amount of music by women in their texts.¹⁸ The second edition of Cleland/Dobrea-Grindahl (published 2015), for example, included no such examples, but the third edition (published 2021) now includes five examples total by four female composers. The current editions of Jones/Shaftel, Merritt/Castro, and Phillips/Murphy are all notable for including more than a handful of examples of music by women: in Phillips/Murphy, in particular, roughly 20% of the Ear Training volume's examples and 25% of the Sight Singing anthology's examples are by female composers.¹⁹ On the other end of the spectrum, McCarthy/Turek, Marcozzi, and Horvit/Koozin include only music by male composers, as do several of the singing anthologies. While other forms of diversity are less apparent on a simple scan through an index, it is likely that white composers are overrepresented in all textbooks.

The extent to which mainstream textbooks do not reflect the diversity of the students they serve (much less North America, or the world) is a result, in part, of being situated within a tradition that is focused on a specific historical repertoire associated with eighteenth- and nineteenth-century Europe. As such, the "alternative" textbooks that deal with contemporary, mostly American music are significantly more diverse. Radley, in particular, avoids many of the blind spots of mainstream texts' repertoire choices: it is not piano-centric, it is full of real music, and on any given page with multiple examples, one is likely to find music by women and people of color. While cost is often cited as a barrier to incorporating more contemporary,

18 This review relies on the conventional, binary marker of gendered names in this discussion. The full spectra of gender identity and sexual orientation are thus not reflected. Nevertheless, examples in aural skills textbooks are typically presented simply as a few measures of music, a name, and perhaps a date, so gendered names are also the data most obvious to students.

19 In addition, roughly 5% (ear training) and 8% (sight singing) of examples in Phillips/Murphy are by composers who meet the authors' definition of "BIPOC" (Elizabeth West Marvin, private communication, 6/23/2022). Perhaps ironically, given the efforts to which the authors have gone to incorporate music by marginalized composers, very few of the examples in the ear training textbook are identified or attributed, to keep students from looking up answers online. As such, this diversity may not be apparent to students—though it will be much more obvious in the accompanying sight-singing volume (and the correlated textbook *The Musician's Guide to Music Theory*).

diverse music into mainstream texts, the Radley is less than half the cost of the least-expensive mainstream text (though it is also less comprehensive).

So-called “atonal” music has long occupied an awkward place in aural skills instruction. Karpinski’s pedagogy text *Aural Skills Acquisition* omits atonal skills altogether, as do many of the listening-focused texts reviewed here. On the other hand, almost all singing anthologies contain at least a limited number of atonal melodies. But even in the textbooks that include atonal music, it can seem discontinuous with the rest of the text. For example, Cleland/Dobrea-Grindahl states, “Hearing tonally is the basis for the method of this text up to the point of studying post-tonal music. Once this study begins, one must adjust his or her methodology to deal with the unique characteristics of the musical system” (xiv). Presumably, this repertoire is included because it is traditionally addressed in music theory curricula.²⁰ Yet while Michael Rogers justified the place of twentieth-century music in curricula by calling it “the music of our own century and times” (2004, 71), the music of Schoenberg, Stravinsky, Bartók, and Debussy that often forms the core of such chapters no longer fits this description.²¹

It seems worth articulating two possible purposes for studying atonal music in aural skills. On the one hand, it is important to study recent music and musical practices. On the other, students who have experience with music that is not diatonic and functionally tonal will be able to engage with a wide variety of music, including different musics of the world. At one point, the music of 20th-century Modernist composers fit both of these goals fairly well; arguably, this is no longer the case. Both reasons offer opportunities for new forms of pedagogy that might help future textbooks and editions stand out. A close engagement with recent and current music—whether popular, experimental, electronic, or something else—has the potential to give curricula greater relevance and inspire new activities. And an exploration of different kinds of music-making, listening, and reading that are relevant to a variety of traditions around the world would both be incredibly valuable and represent a sea-change in how we teach aural skills.

20 The extent to which this connection is made clear varies. Phillips/Murphy and McCarthy/Turek are both closely modeled on music theory texts: as such, they each devote around 70 pages to covering the typical core content of music theory courses on nondiatonic music from pentatonic scales to 12-tone serialism. Karpinski and Cleland/Dobrea-Grindahl, on the other hand, are more independent from theory curricula. As such, these each give atonal music briefer treatment, but also take more care to make connections with already-developed aural skills, including suggesting that atonal melodies be understood as concatenations of short, tonal fragments.

21 The styles of these composers also dominate the two main textbooks dedicated to aural skills and atonal music, Friedmann 1990 and Edlund 1964.

Activities

The hegemony of sight singing and dictation among tasks represented in the reviewed textbooks has related ethical implications. As Rosa Abrahams has written, “foregrounding notation and music-reading as a gateway to advanced music study strengthens the implicit message many students already receive in college: that notated music is worth studying, while music from non-notated traditions is just ‘entertainment’” (2021, 83–84). These tasks also require pre-existing music: you cannot dictate or sight read something unless it already exists. When foregrounded, such activities may reinforce the sense that music worth studying comes from a canon that is already written and whose boundaries have already been set. Why, then, are sight singing and dictation seemingly synonymous with “aural skills,” while other tasks, such as improvisation, keyboard exercises, and even instrumental sight reading, are seemingly optional?

Michael Rogers argues that “dictation and sight reading should be thought of as opposite sides of the same coin,” useful for developing what he calls “the understanding ear and the hearing mind” (2004, 100; italics removed). This suggests that neither sight reading nor dictation are goals in and of themselves; indeed, in a discussion of the purpose of sight reading, Rogers states, “If we had some way of crawling into a student’s brain to observe, like a mouse in the corner, what mental processes were going on, then singing would not be necessary” (2004, 128). Yet Gates 2021 found no improvement in students’ “internal auditory imagery” from a year of aural skills instruction.²² Similarly, Karpinski argues that dictation is primarily useful because it “can help to develop some very important musical skills such as musical attention, extractive listening, short-term musical memory, musical understanding, and notation.” Yet Karpinski also points to the “inadequacies” of melodic dictation as a diagnostic tool: as a complex task with many components, identifying the source of student difficulties can be extremely difficult, and it is an inefficient way to practice each of its individual components (musical memory, tonal and metric understanding, notation, etc.; 2000, 62).

²² Counterintuitively, Gates found that students exempted from the aural skills curriculum *did* show improvement over the year. Gates speculates that “students whose imagery abilities are already developed enough to permit their exemption from first-year aural skills may already be able to actively recruit their imagery in other musical endeavors, resulting in improved imagery ability over the seven months of first year, general training. Those with more limited imaging abilities are less likely to use imagery in complex musical tasks, resulting in less growth over the same time period” (2021, 4.7).

If the true purpose of aural skills classes goes beyond dictation and sight singing themselves, then we should clearly define what the outcome(s) might be. For example, is the purpose of sight reading to make students better sight-readers? If so, then why are sight-reading exercises intended for students' primary instruments virtually absent from textbooks? If, on the other hand, the true purpose is to build students' internal auditory imagery abilities, then why are suggestions from Klonoski 1998 largely ignored? If one purpose of dictation is to build focused listening skills such as a conductor might use as they lead their ensemble, why do we not have students practice their listening skills in small, interactive ensembles rather than sitting at desks listening to an engineered recording or piano? If our purpose is for students to develop into what we might think of as "native speakers" of a musical language, why do our primary activities focus on transcribing and reading but not interaction and creativity?

One cynical answer to this question is that, as Michael Rogers writes, "we are always attracted to teaching situations, in both ear training and analysis, that favor absolute right or wrong answers" (2004, 101). Of course, a student's notated dictation (or performance) often gives no clues as to the origin of its mistakes: did the student misread the clef, forget the melody, ignore scale degrees in favor of basic contour, or simply get so nervous that they could not apply the strategies they have been studying? But both dictations and performances of notated music have clear right and wrong answers, and grading keys tend to focus on these.²³

Focusing on activities that are easy to grade may seem helpful to the instructor, but it has negative consequences—even beyond the question of whether the simple comparison of a student product and an answer key can truly do justice to the complex processes the student has completed. It tends to focus on product rather than process, making students nervous and encouraging fixed mindsets ("I'm just bad at aural skills"). It discourages difficult-to-grade ensemble work, limiting our ability to be relevant to students' collaborative music making and skills. And in the end, it may not even be as helpful to the instructor as it might at first seem. Focusing on objectively right or wrong answers forces us to adopt a strategic and often unmusical mindset, agonizing over exactly how many points should be deducted for (for example) a series of correct pitches written starting on the downbeat instead of with an anacrusis. If we adopt more creative, collaborative, and complex activities, we may find that letting

23 The importance of "objectively" right and wrong answers is even more important when instructors are chosen without regard to pedagogical training and given little credit. Anecdotally, we suspect this is unfortunately common in aural skills teaching.

go of an imagined objectivity allows us to assess and give feedback in more holistic, process-oriented ways.

In the end, however, it is our sense—after perusing the textbooks and apps reviewed here—that terms such as “aural skills” and “ear training” are too often simply synonymous with “identification, sight singing, and dictation.” In 1997, David Butler identified a “general lack of focus in defining educational objectives in aural training” (1997, 40), while in a 2020 aural skills instructor survey, respondents’ statements about the purpose of aural skills classes tended to either give broad, philosophical goals (often emphasizing phrases like “seeing ear” and “hearing eye”) or specify specific tasks (sight singing, dictation, notation, etc.; Chenette et al. 2020). Such vague definitions—which typically avoid mention of concrete, observable outcomes—do not give much direction to those who might want to seek new activities. In this context, Rogers’s definition of the term “ear training” as “both of these traditional skills” (sight singing and dictation) feels a bit like the bartender in *The Blues Brothers* explaining that the bar hosts “both kinds” of music—“country *and* western!” These activities may seem like they encompass all aural skills, but if we are willing to look beyond them, there is a vast array of new activities that would enrich our students’ learning by making it more collaborative, creative, holistic, and applied.²⁴ Of course, there is a chicken-or-egg problem here: to the extent that schools define their aural skills curricula as consisting of sight singing and dictation, textbook authors and publishers will continue to create content in this model, and as long as the majority of textbooks follow this model, it will continue to be the most convenient one for instructors to follow. (Graduate placement exams and AP Music Theory also contribute to this cycle.) It may take a careful balance between serving these “traditional” needs and introducing new activities for a textbook to start helping instructors move in new directions, a balance already sought in some of the more innovative texts reviewed here.

Conclusion

What, then, is the current state of aural skills instructional materials?

In general, the reviewed materials suggest that aural skills instruction is dominated by a few activities: identification drills, sight singing, and dictation. These activities define the types of materials available (listening-based vs. sight-singing anthologies) and occupy the vast majority of textbook pages. They are typically applied to musical

²⁴ A starting point for such a curriculum might be Example 15 in Chenette 2021c, which imagines activities supported by aural training that are relevant to a wide variety of musical fields and practices.

materials derived from music theory curricula, and as a result they have many of the same concerns and priorities as these curricula, including prioritizing musical materials and practices of the European eighteenth and nineteenth centuries. These aspects of aural skills instruction have not changed much in a long time, beyond the development of new technological tools put to old ends.

And yet, there is movement in new directions, some of which responds to recent developments in aural skills pedagogy research. Several texts have heeded calls for more improvisation, error detection, diverse repertoire, focus on real music, and more. Some technological tools, too, move in new directions by asking more creative questions and engaging with more directly musical tasks, sometimes without notation. Findings in cognitive science, too, have been considered in the creation of several texts.

In the course of this review and survey, we have noted a number of possible future directions for textbooks and technologies. These include integrating even more diverse tasks and repertoire, embracing creativity as well as reproduction, considering musicality, using instruments, teaching aural fundamentals more thoroughly, and exploring applications of aural skills to fields outside of music theory.

The biggest need that we found across types of texts and apps, however, is for our field to more thoroughly consider learning objectives. What should students be able to do at the end of their aural skills training? We suspect that the answer is likely not “notate eight-bar melodies without any context in four hearings.” We are probably more interested in skills like the following:

- Identify errors in an ensemble rehearsal.
- Improvise an accompaniment to a requested song for a music therapy client.
- Identify and “lean into” expressive moments such as chromatic chords in performance.
- Imagine the sound of notated music.
- Transcribe a jazz solo to better understand an improviser’s approach.
- Listen holistically to performed music.

These answers might differ among institutions and degree programs: for example, certain musicians would benefit from being able to walk into a recording session and sight-read a nearly accurate version of a score, while others might benefit more from improvisation skills. Contrary to the practice of contemporary texts in other disciplines, aural skills textbooks seldom begin each chapter with specific learning objectives.²⁵

25 One notable exception is Phillips/Murphy. Yet even here, objectives often do not reference “real

Anecdotally, we know that many instructors do hope that their instruction leads to these kinds of outcomes. Nevertheless, we should be careful in assuming that sight singing or dictation will automatically lead to improvement in these goals. For example, as mentioned above, Gates 2021 found that first-year aural skills students showed no improvement on measures of internal auditory imagery. Considering the centrality of this skill to justifications of sight-singing textbooks, we should be thinking about how to alter our activities to do better here.

Naming such objectives would likely diversify our field and assist in the evaluation of materials. For example, if “identifying errors in an ensemble rehearsal” is important, then error detection exercises that focus on repeated listenings to single-line, out-of-context melodies might be replaced with activities that invite students to recognize naturally occurring errors in actual performances of both solo and ensemble music (Davis 2010). If internal auditory imagery is important, then we need to incorporate exercises designed to encourage such thinking (Gates 2021, Klonoski 1998). While sight singing is often assessed in individual, high-stakes hearings, we might better foster transfer to ensemble music-making if we organized students into small groups and had them sight-read ensemble music for ten minutes at a time (Chenette 2021a). Such thinking would help us better evaluate whether apps/websites fit our priorities, consider the curricular place of different repertoires, and design new, non-canonical activities that are appropriate to those outcomes. We can imagine a day when materials are planned and evaluated according to the degree to which they prepare students for these real-world outcomes, rather than the degree to which they train students to perform identification, sight singing, and dictation applied to music theory topics.

Whatever specific learning outcomes we desire for students, this survey of the aural-skills landscape suggests that more—and more careful—attention to our assessment methods will also be crucial. As documented by Gillespie 2001, assessment methods homogeneously tend to focus on the minutiae of the task at hand (e.g., the number of notes right or wrong in a dictation)—strongly implying a need for innovation in this regard. In this light, it is striking that most aural skills texts do not even specify how their activities should be assessed.²⁶ This omission (whatever the reasons behind it) leaves a helpful space for instructors to build new evaluative strategies. Rather

world” outcomes or skills, but rather traditional components of aural skills curricula, such as “Identify intervals in major- and minor-key music” (Ear Training volume, 37).

²⁶ When providing assessment for dictation or singing exercises, the software packages surveyed here tend to reflect the common “one-point-per-note” perspective. Kleppinger 2017 questions the value of this approach with regard to in-class assessment.

than fussing over whether every note of each assigned melody was sung correctly, teachers are free to develop a broader rubric that tracks students' progress across many melodies and toward larger curricular goals.²⁷ When we consider the role of each activity in a trajectory of learning that is directed towards a specific outcome, better assessment methods can emerge.

It is our sense that aural skills pedagogy is on the cusp of large and exciting changes in the student outcomes it stresses, the curricular approaches used to achieve them, and the assessment methods that track students' progress. Those trends are apparent in current research, and are just beginning to break through to the texts and software that support this teaching. We expect that ongoing innovation in the classroom and in those supporting materials will invigorate one another and move our instruction forward—perhaps in ways we cannot imagine. The ultimate obsolescence of this essay will serve as a marker of that progress.

27 One option is found in the Phillips/Murphy singing anthology, where students are advised to evaluate each other based on a holistic scale (2=excellent, 1=fair, 0=weak). Instructors could adopt a similar approach in assessing overall quality rather than grading the accuracy of every pitch (particularly during a sight-reading task).

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