

# **A Systematic Approach to Voice**

*The Art of Studio Application*

Second Edition

**Kari Ragan, DMA, MM, BM**





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# Preface

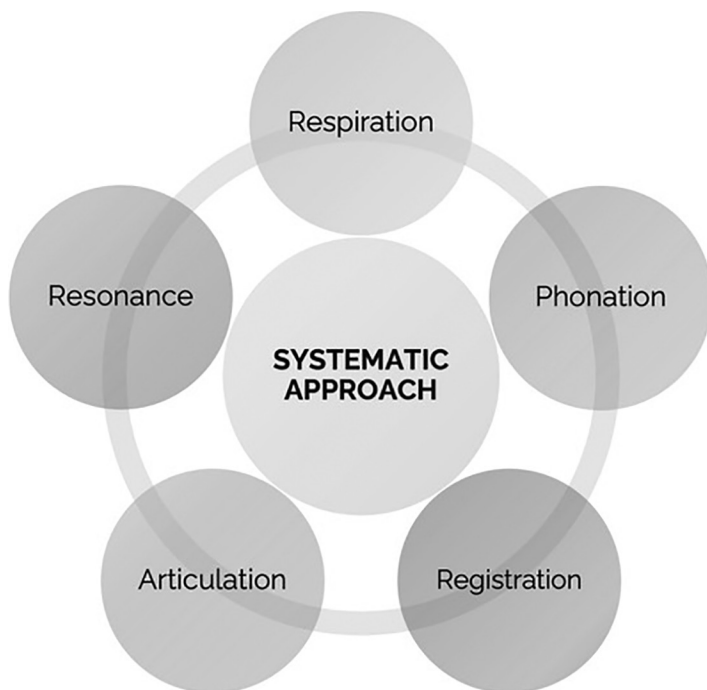
I began teaching singing more than 40 years ago, during my sophomore year of college. I was certainly too young and inexperienced at the time and often joke that those early students deserve a refund. Yet my first college voice teacher at Pacific Lutheran University, Mrs. Barbara Poulshock, had faith that—even as a young singer—I could offer meaningful insights to a group of high school students. I had no idea how profoundly that experience would shape the course of my life. In the hubris of youth, I was going to be a *singer*, not a teacher—of that I was certain. And yet, through college, as a young emerging opera singer, and still today, I have made a living gratefully—and passionately—teaching singing.

It is the accumulation and essence of those years that led me to write this book—a daunting task. Before undertaking such a journey, one must ask: *What can possibly be added to the abundance of existing knowledge on teaching singing?* I offer only this: Through years of study with renowned voice teachers; degrees (BM, MM, and DMA) in vocal performance; countless hours in lessons, coachings, and practice rooms; professional performance experience; relentless pedagogical inquiry; and extensive teaching—an average of 36 contact hours a week—across academic and independent studio settings, working with classical and contemporary singers of all ages and backgrounds, I have gained a depth of experience that I hope is of service. My work in affiliation with medical voice teams to collaboratively rehabilitate singers with vocal injury or pathology has further underscored the urgent need to translate voice science into a framework that is accessible and actionable.

Some of what inspired the approach of this book can be attributed to Scott McCoy's seminal work, *Your Voice: An Inside View*. I first discovered his book at a National Association of Teachers of Singing (NATS) conference shortly after its publication. As an Indiana University-trained singer (BM and MM), I took a pedagogy course using Dr. Ralph Appelman's *The Science of Voice Pedagogy*. Yet, with my sights then set on a singing career, I had not yet

recognized neither how deeply voice science could inform my own singing nor studio application. Over the years, I have read many influential pedagogy texts. *Your Voice: An Inside View* uniquely resonated with me due to its structure and layout. It presents science-informed principles in an organized, accessible manner. Crucially, it offers science-informed information *without imposing a specific teaching philosophy*. That absence of fixed ideology was empowering—it enabled me to augment my own practice-based experience without needing to conform to someone else’s methodology. Instead, it supported the answers I had long been seeking. That foundation allowed me to deepen my knowledge, refine my intuition, and expand my creativity as a teacher.

*A Systematic Approach to Voice: The Art of Studio Application* presents an organizational template that integrates science-informed principles of voice production with pedagogical application for the training of singing artists. Central to this approach are the five systems of voice production: respiration, phonation, registration, articulation, and resonance. Each system-focused chapter offers an



overview of its mechanics (*Foundations and Function*), anatomical and physiological *Key Takeaways*, and targeted strategies for *Studio Application*. *Habilitative Vocal Exercises (HVEs)*—function-based vocal tasks designed to build efficiency, coordination, and endurance—are presented within a structured yet adaptable framework that supports singers across styles and skill levels.

The history of voice pedagogy is compelling—a field rich in tradition, yet also fraught with misinformation and folklore. Many historical pedagogues laid a foundation for technique that still holds great merit, though their semantics sometimes require reinterpretation through a science-informed lens. It is a privilege to carry forward the legacy of great teaching artists. My ideas are a synthesis of the work of extraordinary and generous teachers, singing colleagues, voice scientists, laryngologists, speech-language pathologists, and authors to whom I am deeply indebted. Most importantly, I am profoundly grateful to *each student* who has collaborated with me on the journey toward efficient and expressive singing.

# A Note About This Book

*A Systematic Approach to Voice: The Art of Studio Application, Second Edition* is designed as a flexible and enduring resource for voice teachers, coaches, speech-language pathologists, and singers seeking a structured pathway to skill acquisition. Whether you are new to science-informed pedagogy or looking to deepen your practice, this book offers a systematic framework for applying voice science principles in real-time teaching and singing contexts.

This book is intended for:

- Voice teachers at all stages—whether working in academic institutions or independent studios, from those just beginning to seasoned educators refining their approach.
- Singers engaging in skill development—whether new to pedagogy or seeking to expand their understanding of voice function and training.
- Speech-language pathologists who work with performing artists, especially in the habilitation and rehabilitation of the singing voice.
- Students and instructors in voice-pedagogy courses and practicum seminars (undergraduate, graduate, and continuing education).
- Choral directors and music-education faculty/students—K–12 through collegiate—seeking studio-tested strategies for ensemble warm-ups, skill acquisition, and healthy voice use across developing and mature voices.

Originally developed for voice studio teachers, singers, and a university pedagogy practicum course, this book has since been adopted across voice-pedagogy and choral/music-education curricula for its studio-to-ensemble practicality.

This second edition includes significant structural revisions as well as thoroughly reviewed and clarified content. The core information remains, but the structure, headings, and language have

been refined to provide a clearer and more accessible resource for singers, teachers, and clinicians.

This expanded second edition also introduces several new chapters that deepen the pedagogical framework and broaden its application. These include an introduction to Evidence-Based Voice Pedagogy (EBVP); a significantly expanded Phonation chapter and detailed discussion of semi-occluded vocal tract exercises (SOVTEs), including a systematic approach to their use in studio application; and a dedicated chapter on *Vocal Cool-Downs: Principles and Practice*. Across the core systematic chapters, new and revised Habilitative Vocal Exercises (HVEs) are introduced, and subsequent chapters extend this work through specific stylistic and identity lenses—for example, Jordyn Day’s *Pop Singing: Musical Foundations*, which applies the systematic approach to the pop genre; and Jae Bernado and Emerald Lessley’s *The Transgender and Gender-Expansive Singer*, which offers detailed guidance on adapting these exercises for transgender and gender-expansive singers. Additional invited contributions include Lynn Maxfield’s insightful chapter *Motor Learning Theory Applied to Teaching Singing*.

Whether teaching or learning, readers will find tools to help bridge science-informed knowledge with the lived experience of singing and instruction.

## **How This Book Is Organized**

Each voice system chapter follows a consistent three-part structure:

- *Foundations and Function*: An overview of physiology and function for that system. While not an exhaustive anatomy reference, it offers essential context for the included exercises.
- *Key Takeaways*: Essential principles that ground both teaching and learning.
- *Studio Application: Habilitative Vocal Exercises (HVEs)*: Twenty to 25 exercises per system. Each includes:
  - *Purpose of Exercise*: Articulates the intent behind the HVE.
  - *Exercise Cueing*: Offers clear, actionable instructions to guide use.

## How to Navigate This Book

This book does not need to be read cover to cover. It is designed to be used flexibly, depending on your needs:

- Need help with a specific vocal challenge? Go to the relevant chapter. For example, for jaw or tongue issues in singing, see Chapter 6: *Articulation System*.
- New to science-informed pedagogy? Don't worry about mastering every detail in the *Foundations and Function* sections on your first read. Let the anatomical concepts wash over you—they may become more meaningful as your understanding deepens over time.
- Exploring exercises? Start with the *Key Takeaways* in each chapter, then move into the *Studio Application* section to experiment with HVEs that suit your or your students' needs.

To get the most out of this book, consider developing a personal system for tracking your responses to the HVEs. Use margin notes, color-coded tabs, or digital annotations to mark exercises that:

- Resonate with your teaching or singing
- Seem unclear or warrant further exploration
- Do not appear to facilitate the desired change

## A Note on Redundancy

This book includes intentional redundancy. Each Habilitative Vocal Exercise (HVE) stands alone, with full explanation and cueing, even when similar content appears in previous exercises. This approach supports nonlinear reading: Whether you begin in the middle or end, you will find complete information without needing to flip back.

Additionally, while each exercise is presented with defined *purpose* and *cueing*, teachers and singers are encouraged to modify them as needed. Change the difficulty of the vocal task, adjust the aesthetic, explore variations of patterns, add a kinesthetic

tool—ultimately, an exercise only works when it meets the needs of the individual singer.

This book is meant to be dynamic and revisitable—a companion to your evolving teaching or singing journey. Whether you are a student, educator, or clinician, it is designed to grow with and support your practice across time and context.

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Kari Ragan, DMA, MM, BM, is an internationally recognized voice pedagogue and Singing Voice Rehabilitation Specialist (SVRS) with a career spanning more than four decades. She is known for her commitment to applying voice science in service of artistic expression—a guiding principle that has shaped her work with singers across genres and career stages.

Dr. Ragan earned her Doctor of Musical Arts from the University of Washington (2005) and both a Master and Bachelor of Music in Vocal Performance from the Indiana University Jacobs School of Music. She received the Van L. Lawrence Fellowship in 2012, was named a Master Teacher for the NATS Intern Program in 2021, and was inducted into the American Academy of Teachers of Singing in 2025. From 2010 to 2021, she served on the voice faculty at the University of Washington and has maintained a vibrant independent voice studio since 1983.

Working in affiliation with the University of Washington's laryngology program, Dr. Ragan collaborates with a multidisciplinary voice team to support singers recovering from vocal injury or pathology and partners with voice clinics throughout the United States to help rehabilitate injured voices.

An active presenter and educator, Dr. Ragan is frequently invited to give workshops and lectures for voice organizations and academic institutions nationally and internationally. She has presented for NATS, the Pan American Vocology Association (PAVA), The Voice Foundation, the International Congress of Voice Teachers (ICVT), and many others.

Dr. Ragan is the co-founder and organizer of the multi-disciplinary Northwest Voice: The Art and Science of the Performing Voice Conference. Since 2011, she has also served as moderator of the popular NATS Chat series.

## Chapter 1

# A Systematic Approach to Voice

*Technique is inseparable from art. Only by mastering the technique of his material is the artist in a condition to mould his mental work of art and to again give it—his possession borrowed from life—to others. Even artists intellectually highly gifted remain crippled without this mastery of the technique.*

—Lilli Lehmann, *How to Sing* (1914)

### A Systematic Approach

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This book does not advocate a particular *method* of teaching singing. Instead, it presents a *systematic approach* grounded in scientific principles that, combined with a voice teacher's trained ears, intuition, creativity, and experience, guide singers toward technical proficiency. It is founded on the belief that a science-informed approach to training promotes efficient singing—laying the groundwork for artistry and expressivity to emerge and flourish. This book is the result of decades of professional training and performance experience, as well as pedagogical study and teaching experience.

Teachers of singing have access to a vast body of research on the principles of voice production. Yet there remains a pressing need for a pedagogical framework that translates this knowledge

into meaningful studio practice. This book provides such a framework—an *organizational template* that integrates science-informed principles with *practical pedagogy*. While a significant portion of this book is devoted to foundational aspects of vocal function—examining the essential systems that govern efficient singing—this information is provided to *serve* applied teaching, not as a stand-alone theory. Each chapter focusing on a voice system presents an overview of its mechanics, distilling key anatomical and physiological takeaways to support applied teaching. Central to the book’s purpose is the strategic *application* of that knowledge: providing teachers with actionable tools in the form of *Habilitative Vocal Exercises (HVEs)*, each embedded within a systematic approach to skill development.

An organized framework for voice training enables both teachers and singers to navigate the complexities of voice technique with confidence and insight. Rooted in voice science, this framework is built on the five key systems of voice production—*respiration, phonation, registration, articulation, and resonance*—which function both independently and in close interdependence. Understanding these systems allows teachers to assess technical challenges more effectively and design targeted vocal exercises that promote efficiency and consistency.

With this knowledge, voice teachers function much like investigators, analyzing vocal challenges through keen aural and visual observation. Rather than relying on conjecture, a science-informed lens helps assess technical inefficiencies and guide targeted instruction. This organized approach offers *multiple pathways to solutions*, reducing guesswork and making training more effective.

Over time, research has deepened our understanding of voice training. Historically, voice pedagogy relied heavily on imagery-based instruction. Modern approaches balance objective knowledge with metaphor and sensory awareness. While science provides insight into the mechanics of singing, the strategic use of *science-informed imagery* can further elicit kinesthetic responses and deepen a singer’s understanding of their instrument.

Sequencing vocal exercises in a methodical progression allows reliable skill acquisition, ensuring that singers build a functional technique rather than relying on chance or intuition alone. This intentional design promotes faster and more consistent technical improvements, offering clear pathways for refining vocal function

over time. This approach allows teachers to select, design, and sequence vocal tasks through a systematic lens, *recognizing that adjustments to one part of the system inevitably influence the others*.

A key strength of a systematic approach is its adaptability. Applicable across *all genres* and *skill levels*, it provides a dependable foundation for developing both technical skill and artistic expression. As voice science continues to evolve, pedagogical strategies can advance within this framework while ensuring core principles remain intact. The goal is not to replace the artistry of teaching, but to enhance it—offering structured yet flexible tools that support responsive pedagogy and promote vocal efficiency across diverse teaching contexts. This not only establishes reliability but also equips teachers with the strategies needed to guide singers toward technical and artistic growth.

There are many layers to structuring a successful voice lesson. While artistry is the ultimate goal of performance, a primary responsibility of the voice teacher is to guide the development of reliable vocal technique. A systematic approach provides the framework for a well-structured lesson, allowing for a balance between consistent pedagogy and adaptive teaching. It also offers singers a clear and transferable template for home practice—bridging the work of the lesson with the development of independent skill. This ensures that singers receive both the technical foundation and the artistic flexibility needed for long-term growth.

### **A Systematic Approach**

- Provides a structured template for organizing vocal training through *respiration, phonation, registration, articulation, and resonance*.
- Supports more accurate assessment of technical challenges.
- Guides the design and sequencing of *Habilitative Vocal Exercises (HVEs)*.
- Promotes consistent, efficient vocal function across all genres and experience levels.
- Evolves alongside emerging voice science while maintaining a cohesive pedagogical framework.

## The Art of Studio Application

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Voice pedagogy is both a science and an art—but here, the art refers to the nuanced craft of teaching. It requires more than just an understanding of anatomy, physiology, acoustics, and cognitive science; it demands the ability to translate those principles into individualized, responsive instruction. The artistry of teaching lies in making informed choices in real time—adapting to each singer’s needs, style, and learning process. A comprehensive pedagogy draws on both scientific knowledge and the intuitive, flexible application of that knowledge in the studio.

While voice science significantly enhances our understanding of the mechanics of singing, it remains the teacher’s role to translate this knowledge into effective, applicable instruction. In 2014, the American Academy of Teachers of Singing (AATS) published a paper titled “In Support of Fact-Based Voice Pedagogy and Terminology,” stating:

Voice science does not tell us what to do as teachers of singing; it tells us what is happening during the act of singing. *Science informs art, it does not create it.* (AATS, 2014)

The challenge for voice teachers lies in bridging scientific insight and artistic expression—tailoring evidence-informed strategies to each singer’s unique learning process. Victor Fields encapsulates this balance:

. . . singing is both science and art. Science is concerned largely with laws, rules and techniques, with methodology, purposes and goals; while art is concerned with finished outcomes, with the perfected expression. Science may be regarded as the *means*; art the *end* of learning. (Fields, 1972)

The art of studio application exists on a continuum between *science* and *art*, *athlete* and *artist*. While technical knowledge is essential, the timing and delivery of that information can greatly influence a singer’s ability to internalize and apply it.

Singing is a discipline rooted in the physical demands of performance—a craft grounded in execution. While a science-

informed approach is essential, overexplaining mechanics can sometimes shift a singer's focus from experiencing their voice to analyzing it—disrupting the natural flow of performance. Teachers must gauge when and how to introduce technical concepts so that explanations support, rather than disrupt, vocal development. A well-timed, concise explanation can clarify a concept, while excessive detail may cause hesitation or disengagement. Effective instruction involves knowing when to step in with information and when to step back, allowing the singer to process and apply their skills organically. Principles of motor learning theory, which help explain how singers acquire and retain new skills, are explored in detail in Chapter 12, authored by Lynn Maxfield.

Each singer processes and internalizes information differently, interpreting concepts both mentally and kinesthetically. Some singers benefit from technical explanations, while others require a more experiential approach before cognitive or conceptual understanding takes hold. Adapting to each singer's learning style ensures that technique is absorbed in a way that feels both intuitive and applicable. Effective voice teaching must be both personalized and flexible yet firmly rooted in the principles of voice production that allow for technical growth and artistic freedom.

## **Heuristic Model for Vocal Learning**

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A heuristic model for vocal learning encourages experimentation and guided discovery, empowering students to explore and develop their skills through their individual learning styles. A systematic approach provides a structured framework for understanding voice production while supporting the self-inquiry necessary for a heuristic learning process. This approach fosters self-efficacy and autonomy, equipping singers with the ability to assess their own progress and refine their technique over time.

A heuristic approach inspires lifelong learning by encouraging singers to investigate, experiment, and trust their instincts. Through trial, error, and discovery, singers become active participants in their own development rather than passive recipients of instruction. This ability to evaluate their practice independently is invaluable in building technical skill, artistic expression and, ultimately, mastery.