

Throughout the book, Dr. Katz offers many “gems,” to guide the clinician through the therapy process toward a successful outcome. For example, he states “In APD, continued attempts without success often reinforce confusion.” He reminds us that “Case history information is our *first* test.” Whether in life or APD therapy, “To change the way the brain performs, repetition is necessary.”

For advocates of the Buffalo Model, *Therapy for Auditory Processing Disorders, Simple Effective Procedures*, would be a helpful addition to one’s professional library. This manual is a practical, step-by-step guide to select and conduct appropriate treatment, based on the category of dysfunction. The book provides forms and methods to document and analyze intervention efforts. For those who follow other APD approaches, this book could be relevant because there are many similarities among protocols. For example, Phonemic Training, as described in the book, could be applicable for those identified with the Bellis Auditory Decoding Deficit subprofile. For those unfamiliar with APDs, this book offers a preliminary introduction to APD, but the evaluation, interpretation, and remediation covered in this book are limited to the Buffalo Model. To benefit from this book, the APD novice should read additional resources to learn about the historical perspectives, anatomical bases, development of diagnostic tests, and remediation protocols for APDs.

REFERENCES

- Oertel, D. (1999). The role of timing in the brain stem auditory nuclei of vertebrates. *Annu Rev Physiol*, *61*, 497–519.
 Winer, J., Miller, L., Lee, C., et al. (2005). Auditory thalamocortical transformation: Structure and function. *Trends Neurosci*, *28*, 255–263.

Audiologic Interpretation Across the Lifespan. Debra Busacco. Boston, MA: Pearson Education. (2010). 180 pp., \$70. ISBN-13: 978-0-205-46398-5.

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Audiologic Interpretation Across the Lifespan by Debra Busacco is a unique resource intended as a supplement to primary textbooks lacking a problem-based learning approach. Dr. Busacco has achieved the aim of providing students with a set of case studies with which to develop basic clinical decision-making skills and gain confidence in both evaluating hearing loss and developing “recommendations with rationales” for audiologic intervention. What distinguishes this text from others is that the case studies are presented alongside an overview of the key considerations in audiologic diagnosis and management for individuals at different stages of life.

The book is divided into three parts (all ages, children, and older adults), and each section addresses its learning outcomes well. Topics reviewed in part 1 of the text are those that can be applied to patients of any age, including the incidence of hearing loss in the United States; an overview of the types, degrees, and configuration of hearing loss; and a summary of the components of an audiologic evaluation. Part 2 reviews guidelines for testing infants, children, and adolescents, with emphasis placed on the potential changes needed in the assessment techniques based on the child’s developmental age, and the importance of having a family-centered and interdisciplinary approach to diagnosis and intervention. Part 3 is devoted to the diagnosis and management of hearing loss in older adults. This section is particularly strong, highlighting the need for audiologists to understand not only

changes that occur in the auditory system with aging but also the multitude of changes that can occur in other systems that have implications for our assessments and intervention.

Overall, the case studies present hearing loss related to a wide range of etiologies and include those who are likely to be encountered at different ages in the clinic. Realistic, memorable histories are considered, for example, a case of pediatric noise-induced hearing loss from a personal music player, an adult patient requiring serial audiograms to monitor ototoxicity during chemotherapy, an older adult with dual-sensory loss, etc. After the description of each case are questions that draw attention to important details and reinforce the concept that audiologic interpretation goes beyond the understanding of an audiogram alone.

There are several contexts in which this resource would be helpful for students. First and foremost is with the beginning clinician, who is challenged to integrate information across a range of courses, and because clinical experiences do not tend to follow a linear path, is likely to encounter topics in clinic that have not yet been covered in early coursework. Consequently, having such a resource early-on could be helpful. Likewise, the text would be relevant to students from other disciplines—such as speech language pathology or medicine—who are likely to encounter audiologic test results and could benefit from a basic understanding of audiologic principles across the lifespan (i.e., why tests and recommendations may be different at different ages). Students could also find the book useful while preparing for comprehensive clinical examinations, using the cases and clinical enrichment projects as practice questions and referring to the glossary of terms. Instructors can easily evaluate whether the text would be a practical supplement by comparing the learning outcomes, clinical enrichment projects, and recommended readings with the required primary materials for the course. In summary, this book provides students with an opportunity to practice integrating audiologic test results with consideration of the substantive issues that affect audiologic interpretation for patients at different stages of life.

Acoustics and Vibration Animations (<http://paws.kettering.edu/~drussell/demos>). Dan Russell (2001).

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Developed in 2001 by Dr. Dan Russell, Associate Professor of Applied Physics at Kettering University, the website titled simply “Acoustics and Vibration Animations” is divided into three main sections: Airborne Sound Waves and Sources, Vibration and Structural Waves, and Other Wave Phenomena. It is this first section that will be of most interest to audiologists and hearing scientists, although the other sections do include very useful and intriguing demonstrations. Within the section “Airborne Sound Waves and Sources” are four subsections, each including two to seven sets of visual animations with text explanations: Basic Wave Phenomena, Sound Waves and Radiation from Sources, More Complicated Wave Phenomena, and Room Acoustics. As listed on the website, Dr. Russell has received a number of awards and honors for his site. This review is organized by strengths, weaknesses, student evaluation, and conclusions.

STRENGTHS

Student learning in didactic audiology or acoustics courses can be difficult because of the complexity or novelty of the material. Dr. Russell’s site can be used as a perfect teaching complement to didactic courses in audiology, acoustics, or hearing

science at both undergraduate and graduate levels. Indeed, the visual animations are well planned and suited to student learning, especially those who are visual learners. Both elementary concepts (e.g., “What is a wave,” “Superposition of waves,” and “Fourier decomposition”) as well as complex concepts (e.g., “Doppler effect,” “Wave motion in space and time,” “Phase changes upon reflection,” and “Refraction”) are handled in a scholarly but simple fashion. For each concept, one or more simple animations are shown with an accompanying paragraph that explains and expands on the concept illustrated by the animation. As explained on the site, copyright allows for use in classroom education, and the animations can be easily incorporated directly into lecture presentations or linked from presentation slides, with appropriate acknowledgment to Dr. Russell.

WEAKNESSES

The main weakness of the site is the complexity level of the language (almost at a technical engineering level), which could make learning challenging for undergraduate and graduate students in hearing science. In addition, few audio demonstrations were used, except for the sound clips used for the “Reverberation times in a small room” simulation.

STUDENT EVALUATION

To avoid bias on part of this reviewer who may be associated with wide exposure to psychoacoustics as a professor, a beginning level Doctor of Audiology (Au.D.) student who had completed a semester of a “Hearing science” course was asked to rate several animations of the “Airborne Sound Waves and Sources” section in three areas (organization level, visual appeal, and difficulty level) using a five-point Likert scale (1 = low, 5 = high). Ratings shown in the Table 1 reflect this student’s evaluation of a variety of the animations most likely to be of interest to audiologists and hearing scientists. The mean ratings show that the demonstrations were high in visual appeal and organization level but were also rated high in difficulty level.

CONCLUSIONS

Dr. Russell’s “Acoustics and Vibrations Animations” site is highly recommended to supplement learning in didactic courses in introductory audiology or acoustics (undergraduate) as well as graduate level courses in audiology or engineering (acoustics).

LAY SUMMARY

Two new texts and one Web site are reviewed in this issue. Martha Wilder Wilson notes that *Therapy for APD: Simple, Effective Procedures* by J. Katz is a practical and relevant step-by-step manual of instructions for the administration of specific auditory processing therapy protocols according to the Buffalo Model. Nicole Marrone describes *Audiologic Interpreta-*

TABLE 1. Ratings by a Doctor of Audiology (Au.D.) student using a 5-point Likert scale (1 = low, 5 = high)

Demonstration	Organization Level	Visual Appeal	Difficulty Level
What is a wave?	4	5	1
Wave motion in space and time	3	4	3
Superposition of waves	5	5	4
Fourier decomposition	3	5	3
Phase changes upon reflection	5	5	4
Refraction of sound waves	4	5	4
The Doppler effect	5	5	5
Longitudinal and transverse wave motion	5	5	3
Sound fields radiated by simple sources	5	5	5
Sound radiation from cylindrical radiators	5	5	5
Sound field radiated by a tuning fork	5	5	5
Driving room modes: source location	5	5	5
Reverberation times in a small room	5	5	4
Comparing circular and sinusoidal motion	4	5	1
Mean rating	4.5	4.92	3.72

tion Across the Lifespan by D. Busacco as a unique resource that presents a series of realistic and memorable case studies in a problem-based learning approach; the text acts to reinforce the concept that audiologic interpretation goes beyond an understanding of the audiogram alone. Sridhar Krishnamurti highly recommends the Web site “Acoustics and Vibration Animation” by D. Russell, to supplement learning with visual animations of elementary and complex concepts in hearing science. The Web site is appropriate for introductory or graduate-level courses in audiology or acoustics.

RESOURCES RECEIVED

- Coleman, J. R. & Wolf, E. E. (2010). *Advanced sign language vocabulary raising expectations: A resources text for educators, interpreters, parents, and sign language instructors*. Springfield, IL: Charles C Thomas Pub Ltd.
- Blume, S. (2010). *The artificial ear: Cochlear implants and the culture of deafness*. Piscataway, NJ: Rutgers University Press.
- Schiavetti, N., Metz, D. E., & Orlikoff, R. F. (2011). *Evaluating research in communicative disorders (6th ed.)*. Upper Saddle River, NJ: Pearson Education, Inc.

RESOURCES UNDER REVIEW

- Spatial Auditory Displays Lab (SLAB) real-time virtual acoustic environment rendering system software from NASA Ames Research Center (<http://human-factors.arc.nasa.gov/SLAB>)
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