Resource Reviews

Speech Viewer

Cost: *Speech Viewer Convenience Kit $1,675.00 (Hardware adapter card; Hardware Installation Guide; 3.5 inch diagnostic diskette; microphone; speaker; Speech Viewer application software).*

IBM Speech Viewer Hardware Option $1021.00 (includes all the above hardware but not the Speech Viewer application software. This option is available so that additional computers can be adapted to the Speech Viewer system without purchasing redundant software.

Supplier:
Contact IBM HQ INFO PLACE at 1-800-474-3200 for more information or IBM DIRECT: 1-800-465-1234.

Reviewer:
Nancy Thomas-Stonell
The Hugh MacMillan Medical Centre, Toronto, ON

Purpose: Speech Viewer is an interactive computer system which provides visual and auditory feedback on aspects of speech production such as pitch, loudness, voicing, breath support, intonation, and vowel quality. It has applications for the rehabilitation of a variety of speech and voice disorders.

Description: Speech Viewer consists of software, microphone, speaker, stores, and analyzes speech input, providing immediate feedback. It consists of 12 modules, grouped into three categories according to their clinical usefulness. Speech Viewer operates on all IBM Personal System/2 model 25 or 30 computers (for optimum performance, a configuration with a fixed disk and a color display is recommended) and uses IBM Dos 4.0.

Awareness Modules provide visual feedback on one or two aspects of speech sounds. The colorful graphic displays make abstract speech concepts concrete. The displays use cause and effect to increase the client's awareness of basic speech attributes. There are five awareness modules: Sound; Loudness; Pitch; Voice Onset; and Loudness and Voicing.

Skill Building Modules help the client gain control over speech attributes in a relatively language free environment. Using a video game format, control over pitch, voicing, breath support, and vowel productions can be taught. Auditory and visual displays reinforce successful performance. The modules are flexible and allow the speech-language pathologist to achieve a variety of clinical goals by altering performance criteria or by designing individualized screen layouts. These displays can be saved on disk and used from week to week in therapy. Two modules Vowel Accuracy and Vowel Contrasting use voice recognition to improve vowel quality. Vowel productions are matched against a target vowel template. New vowel templates are easily created so that regional vowel productions can be taught.

The Patterning Modules are technical/analytical displays, incorporating speech playback. These modules allow aspects of speech to be examined in detail and complement the skill building modules. Statistics are available on the percent voicing of an utterance, the mean and median pitch, and the percent saturation (loudness) of the signal amplitude.

The three patterning modules are Pitch and Loudness; the Waveform; and Spectra. The Pitch and Loudness module has a split or overlay screen design similar to the Visipitch, but it incorporates auditory as well as visual feedback. Utterances can be saved on disk and compared across time. A speech sample may be transferred between the Pitch and Loudness and the Waveform modules if additional analysis is required. The Waveform module works like a speech editor. Portions of an utterance can be segmented by cursers and the corresponding waveform pattern displayed. The Spectra module displays the frequency and amplitude spectra of sounds on the screen. Up to five spectra can be frozen on the screen, for comparison purposes.

Comments/Critique: Speech Viewer is very user friendly. The F1 key accesses the Help menu throughout all modules. The colorful displays used in the Awareness modules are attractive and appealing to children. Abstract speech concepts are displayed visually, allowing very young children with little receptive language to benefit from the visual feedback. The Skill Building modules are intuitive, appealing, and extremely motivating. Several of the displays are designed to appeal to young children, however, many patients in their twenties also preferred the game format to the graph type displays. The Patterning modules provide technical information in traditional graph type displays. The addition of auditory feedback to the visual displays increases clients' self-monitoring skills.

Speech Viewer does have some limitations. It is not equipped to assess voice quality. It does not display hypernasality or allow visualization of consonants. Vowel recognition and loudness are expressed as arbitrary numerical scales. These scales require clinical experience for interpretation. The loudness statistics represent the percent saturation of the system. This does not correlate to a decibel scale.

The documentation provided is fragmented. A speech-language pathologist with no previous computer experience may need to consult four manuals in order to install Speech Viewer. Clinical matrices are available in the back of the

manual. These matrices provide suggestions for the potential clinical use of the modules. Unfortunately, no examples are provided showing how these suggestions can be implemented. The user must be familiar with the function of each module before being able to fully understand how it can be adapted to clinical situations. The Speech Viewer product is a new release. It is expected that future versions will contain improvements to both the documentation and the software.

Therapeutically Speech Viewer is excellent. It has allowed the speech-langauge pathologists at the Hugh Mac-Millan Medical Centre to use visual feedback with children as young as 18 months. The increased motivation has resulted in more time spent working on speech parameters. The modules are flexible. They can be adapted to address a multitude of clinical goals. We have used Speech Viewer for aural rehabilitation, for the remediation of apraxia and dysarthria, and to address such clinical goals as reducing jitter, improving breath support, reducing speech rate, easy onset for stuttering and voice, and improving vowel productions. The speech-language pathologists at The Hugh MacMillan Medical Centre have rated the Speech Viewer as a useful clinical tool.

Communication Skills and Classroom Success: Language-Learning Disabled Students

Charlann S. Simon, Editor

Cost: $40.50

Published by:
College-Hill Press/Little, Brown and Company

Available from:
Copp-Clark Pitman Ltd.
2775 Matheson Blvd East
Mississauga, ON

Reviewer:
Janet Mansbridge
Office of Special Services, Nanaimo, BC

This book is intended to provide educators, speech-langauge pathologists, or university students with information concerning the 3-15% of the school population who, because of inferior communication skills, are unable to play the "school game." This book on assessment and its companion volume on therapy methodologies (reviewed below) address the following questions: What are the communication skills and strategies required for school success? How do instructional style and content interface with student behavior? What are some formal and informal ways to measure the communicative competencies required in school?

The book is an edited volume with 13 chapters. The authors (17 in all) share their various perspectives on the language-learning impaired child in the classroom setting. The editor, Charlann Simon, a leader in the field of classroom language, contributes one chapter and bridges the other chapters with transitional notes that review what has been presented and prepare us for what is to come next.

The book includes a description of the language learning disabled student, specific communication assessment suggestions for use with this student, and a discussion of the relationship between written and oral language. The focus is on the whole child in the classroom setting. For example, consider listening skills. The student needs to monitor understanding and to ask for clarification when confused. The student needs a quality listening environment, as opposed to adverse listening conditions that will penalize language impaired children to a greater extent because their linguistic systems cannot compensate. Consider also the match between teacher talk and child listening. In the case of the language learning disabled child, the teacher needs to provide opportunities for the child to ask clarification questions. Consider the unique communication rules inherent in school. In this area, the student needs to know when it is appropriate to talk and how to signal when he/she wants a turn. In addition, this book addresses the interaction between thinking or problem solving and communicating, the language problems observed in poor readers, and the classroom environment and how it affects communication.

I would highly recommend this book to anyone working with language learning impaired students. I like the organization of the book, with its edited chapters allowing a busy speech-language pathologist to select parts to read and use. I have returned frequently to this book for inspiration and ideas.

Communication Skills and Classroom Success: Therapy Methodologies for Language-Learning Disabled Students

Charlann Simon, Editor

Cost: $40.00

Published by:
College-Hill Press/Little, Brown and Company

Available from:
Copp-Clark Pitman Ltd.
2775 Matheson Blvd. East
Mississauga, ON

Reviewer:
Iris Mennie
Box 1066
Duncan, BC

This book was written for educators, special educators, and speech-language pathologists. The reader would require some background in language theory to gain the most benefit. It is edited by Charlann Simon, which for many of us is a recommendation in itself. It is a companion volume to the book reviewed above on assessment. The book's purpose is twofold: (1) to provide information about children who have deficits in skills and strategies required for school success; and (2) to reflect on the quality of instruction and instructional materials used in the school setting and provide suggestions for helping children develop the strategies and skills necessary to learn in the school setting. It has an impressive balance of theory, description, and therapy methods.

There are 14 chapters, each of which stands on its own. Three are written by Simon; eleven are written by other experts in the field. The material is uniformly of high quality and, at the time of publishing (1985), included some of the most recent theories and strategies. Some of the chapters include: (1) Description of the Language-Learning Disabled Student, (2) Relaxation Therapy for Improving Classroom Skills, (3) Functional Flexibility: Developing Competence in Speaker and Listener Roles, (4) Teaching Logical Thinking and Discussion Skills, (5) Developing Listening, Speaking and Writing Skills in Secondary Students, (6) First Steps in Reading for the Language-Different Child, (7) Teaching Verbal Mathmatical Problem-Solving Skills.

The chapter entitled "Learning to Talk-Talking to Learn" is a valuable discussion on the way narratives can provide the required transition from the functions of oral language to the functions of literate language. Chapter 10, "First Steps in Reading for the Language Different Child", and Chapter 11, "Learning to Read: A Metalinguistic Act", provide some additional insights into the connection between listening, comprehension abilities, and reading. Different reading theories are examined, and the need for metalinguistic knowledge is emphasized.

One delightful feature for the busy professional is the use of a "Transitional Note" between chapters. This creates a bridge by relating major points made in one chapter to those in subsequent ones. This book should be read by all speech-language pathologists, especially those working in schools.

Cases in Neurogenic Communicative Disorders

James P. Dworkin and David E. Hartman

Cost: $33.50

Published by:
College-Hill Press/Little Brown and Company

Available from:
Copp-Clark Pitman Ltd.
2775 Matheson Blvd. East
Mississauga, ON

Reviewer:
Shari R. Baum
School of Human Communicative Disorders
McGill University

This text/workbook has as its stated goal: "To augment theoretical as well as pragmatic studies of aphasia, apraxia of speech, the dysarthrias, and the language of diffuse brain pathology." The book is intended for both students and clinicians in the health sciences, and in particular in Speech-Language Pathology and Neurology.

The authors first provide a brief review of the Mayo Clinic classification of neurogenic communication disorders. The remainder of the book presents a series of case histories in random order. The reader is expected to diagnose the disorder and suggest the most likely site of lesion based on the described characteristics. (Worksheets, including diagrams depicting relevant brain sections, are provided for this purpose.) Following each exercise, the authors' diagnosis, together with a brief discussion of how they arrived at their decision, is given. In certain instances, the discussion provides additional information about the course and treatment of the specific disorder.

The workbook format provides a good review for those who wish to test their diagnostic skills based on somewhat limited information. It should be emphasized however (as noted by the authors in the preface), that the reader must have a solid knowledge of basic neuroanatomy and neurophysiology, as well as of neurogenic pathologies in order to make profitable use of the book. Consistent, perhaps, with their classificatory orientation, the authors focus more on disorders of speech production than on deficits in language skills. This imbalance is perhaps the major shortcoming of the text. One additional related point deserves mention: The selected bibliography provided is quite limited in references to current research on linguistic deficits in aphasia.

Despite these criticisms, this work provides a challenging format for review of differential diagnosis, particularly with

regard to disorders of speech motor control. It also makes clear the range of medical, psychological, and linguistic characteristics necessary for appropriate assessment of neurogenic speech and language disorders.

Language Intervention and Academic Success

Geraldine P. Wallach and Lynda Miller

Cost: $37.00

Published by:
College-Hill Press/Little, Brown and Company

Available from:
Copp-Clark Pitman Ltd.
2775 Matheson Blvd. East
Mississauga, ON

Reviewer:
Amy Flemming
Speech-Language Pathologist
School District No. 68, Office of Special Services
436 Selby Street
Nanaimo, BC

This book presents the authors' reframing of how we view language disorders. Learning is conceptualized across a variety of domains including linguistic, logical-mathematical, musical, visual-spatial, and bodily-kinesthetic. Language intervention is seen as an ongoing process of discovering how best to facilitate the match-up between what the student already knows and the information that we are trying to teach.

The text is written for those who teach children experiencing difficulty acquiring and using language. A thorough background in language acquisition, disorders, and learning disabilities is assumed. Teachers of learning-disabled students will recognize many of the cited researchers' names, as well as several of the recommended strategies or intervention approaches.

Wallach and Miller provide guidelines which permit the intervenor to move among approaches, as suggested by the language-disordered student's acquisition of metaprocessing skills. These skills are viewed within the context of emerging literacy as students progress through the elementary school years. The authors meld current research from language development and language disorders, from information processing and cognitive psychology, and from reading theory.

The overall structure of the book is an unfolding of the authors' reframing, from the conceptual framework at the beginning to the concluding remarks in the epilogue that focus on the big picture surrounding language intervention in school settings. Part one outlines four key concepts for language intervention in the school-age period: (1) recognizing the pervasive nature of language disorders; (2) recognizing school as a culture; (3) appreciating communication style differences as a bridge to literacy; and (4) incorporating metastrategies into language and academic programs. Four principles provide the basis for the text's intervention suggestions. The first three principles are student oriented: (1) to provide intervention for LLD students is to assist them in becoming self-responsible, active learners; (2) to help students understand their learning styles and preferences across language and learning domains; (3) to help students make smoother transitions to literacy. The fourth principle pertains to the intervenor, who is to keep in sight the meaningfulness and relevance of the language goals written for LLD students. Finally, language proficiency is discussed as it relates to information processing strategies and individual learning styles and preferences. Unfortunately, there is no detailed description of how the bar graphs, illustrating strengths and weaknesses of a student with respect to Gardner's cognitive framework, were constructed. The reader is left to speculate how a nine was assigned for musical intelligence while a three was assigned for spatial intelligence.

Part two provides information about the planning phases of language intervention. Those planning intervention must consider contextual, curricular, teacher, student task, and sequence variables. Case studies illustrate some common pitfalls, for example, where topic expectations are mismatched, or where the text is decontextualized beyond the student's ability. No pat answers are offered, but the case studies are most useful in cautioning us to avoid making assumptions about what is easy and what is difficult.

Part three contains specific intervention suggestions in the following areas: the transition to literacy, inference and cohesion, analytical strategies (from sentences to words to sounds), vocabulary, and figurative language. In each case theoretical bases for intervention sequences and tasks are discussed. The suggestions for transition to literacy are akin to the current popular "whole language" approach which advocates exposing students to high quality literature. There are several helpful tables that outline components of instructional discourse and macrostructure characteristics of several narrative types. The chapter on analytical strategies is a particularly useful one because of the detailed information on metalinguistic skill development and the progression from semantic to syntactic strategies for sentence processing.

The epilogue takes another look at the relevance and validity of our intervention programs. The sample lesson plans

throughout the text demonstrate the principle of designing relevant intervention. The reader is cautioned that all models of language and learning represent incomplete and abstract descriptions of complex behaviour, although the greatest failure is said to lie not within the models themselves, but within the professionals who interpret them too narrowly. As we continue to understand more about learning and language intervention within the school setting, we will be able to make more effective decisions about what to teach and what not to teach students at which points in time.

The Voice and Voice Therapy (4th Edition)

Daniel R. Boone and Stephen C. McFarlane

Cost: $52.33

Available from:
Prentice-Hall
Carl Henderson
1870 Birchmount Road
Scarborough, ON

Reviewer:
Philip C. Doyle
School of Human Communication Disorders
Dalhousie University

This is a new revision of the original text authored by Boone that has been used extensively in the classroom and clinic for 17 years. The fourth edition follows as an elaboration of earlier editions that were published in 1971, 1977, and 1983. For the first time since its introduction, the text has been co-authored. The fourth edition text follows the format used in the third edition.

In comparing this text to its precursor, the most noticeable change is the shift in Chapter 3 (Voice Disorders). The current edition classifies specific types of voice disorders (i.e., characteristics of the vocal folds) as "functional" and "organic" disorders. It is important to note, however, that issues pertaining to mass-size/approximation changes are mentioned at various points throughout the text. While the move away from the previous mass-size/approximation classification is perhaps beneficial, it may come as a surprise to those familiar with previous editions of the text and with Boone's earlier rationale for avoiding a functional/organic dichotomy. Within Chapter 3 appropriate references from the current literature have been added to the overview of each disorder (e.g., functional aphonia, traumatic laryngitis, etc.).

Chapter 4 (Voice Evaluation) has been expanded somewhat and now includes a brief overview of procedures and

discussion of airflow and air pressure measures using the Phonatory Function Analyzer. Chapter 5 (Voice Therapy for Problems of Vocal Hyperfunction) includes four new facilitating approaches for voice therapy (Glottal Fry, Half-Swallow Boom, Head Positioning, and Tongue Protrusion). Further, four approaches reported in the 3rd edition (Biofeedback, Gargle Approach, Negative Practice, and Voice Rest) have been omitted in the present text. This change is based upon the authors' belief that these previously reported approaches have been shown to be of limited use. As in earlier editions, each facilitating approach is presented in a clear and concise summary that includes the types of problems for which the facilitating approach may be of use, a procedural description of the approach, and a characteristic case history in which the approach was successfully applied.

Chapter 6 (Voice Therapy for Special Problems) addresses disorders that have unique characteristics (e.g., ventricular fold phonation, spastic dysphonia, etc.) and those that exist in the presence of concomitant communication disorders (e.g., hearing impairment and deafness). New additions to this chapter include overviews of "The Aging Voice," "Puberphonia," and "Diplophonia."

Chapter 7 (Therapy for Resonance Disorders) has been elaborated to include a brief discussion of oral video endoscopy and photographs of speech obturators (in the section on Dental Treatment of Hypernasalty). General treatment guidelines for oral-pharyngeal resonance disorders also are provided in this chapter.

The final chapter in the text (Chapter 8 Voice Therapy for Patients with Cancer of the Larynx) provides a brief summary of voice/speech treatment in patients who have undergone subtotal laryngectomy. While the information presented in this chapter does provide a framework for understanding basic anatomical/physiological changes as well as other specific aspects of treatment with the laryngeal cancer patient (e.g., pre- and post-operative visits, post-operative medical care, etc.), the chapter will necessitate use of additional resources.

In conclusion, *The Voice and Voice Therapy*, fourth edition, continues to be a valuable resource for the teacher and the clinician. The obvious strength of this text is in the area of evaluation and treatment of the more common hyperfunctional voice disorders such as nodules, polyps, and so forth. Additional resources will be required for less common problems such as spastic dysphonia. The text should be supplemented with other sources in the areas of laryngeal pathophysiology and specific clinical populations (e.g., children, voice rehabilitation post-laryngectomy, etc.). The text, however, does remain a valuable resource to professionals dealing with patients who exhibit voice problems due to a variety of causes.

Implementing Early Intervention

Carol Tingey, Editor

Cost: $29.00 (U.S.)

Available from:
Paul H. Brooks Publishing Co.
P.O. Box 10624
Baltimore, MD

Reviewer:
Eleanor Stewart-Muirhead
Glenrose Rehabilitation Hospital
Edmonton, AB

Written as a guide to the professional seeking to establish or enhance an early intervention program, this book provides a comprehensive overview of the philosophical and practical considerations of early intervention. Contributors include researchers and early interventionists from the fields of education, occupational therapy, pediatrics, physical therapy, psychology, social work, and speech-language pathology.

It is of interest to note that, although early intervention programs have been in existence for a number of years, the passage of PL99-457 in 1986 mandates that all states in the U.S. must have comprehensive services for infants and toddlers (birth to three years) and their families, within the framework of an individualized family service plan (IFSP). PL 99-457 has generated research, discussion, and debate to fuel existing programs and provided the impetus for further program and policy development. *Implementing Early Intervention* touches on the issues facing early interventionists and offers strategies to meet individual program needs within the parameters of PL 99-457.

The sixteen chapters of the book are organized into four sections: (1) Best Practices in Early Intervention; (2) Administrative Concerns; (3) Implementing Specific Interventions; and (4) Related Concerns. Section one introduces early intervention by providing a historical perspective on early intervention research. Highlighted are those research areas in which further investigation is warranted. A discussion of the difficulties of matching research and administrative concerns is included. The remainder of Section I addresses eligibility and describes representative early intervention programs.

Chapters three to seven, comprising section two, deal with administrative concerns including identifying program costs, negotiating interagency agreements, providing staff develop-

ment, evaluating the program both internally and externally, and targeting mainstreaming. This section contains a useful discussion of the value of a built-in evaluation mechanism for ensuring program effectiveness. The authors target the "who, what, when, where," and most importantly, the "why" in the evaluation process.

Section three, containing chapters eight through thirteen, addresses the implementation of specific interventions. Chapter eight looks at identifying the child's needs, designing goals, and implementing and evaluating treatment. The remaining chapters describe areas of child development: posture and movement skills, cognitive development, language development, social skills, and self-care. While each of these chapters provides a review of developmental skills and intervention strategies, the information presented forms a basis for shared knowledge across the disciplines that can be used to facilitate a co-operative approach to testing the individual child.

Chapter nine, "Atmosphere for Language Learning," presents a review of early communication development and stimulation techniques. The authors describe specific informal and formal strategies for use at the preverbal, beginning word, two-word phrase, and conversation levels. Balancing both approaches, informal and formal, to meet the individual child's needs is acknowledged. Included in this chapter is a discussion of augmentative and alternative communication. Key questions in the decision-making process are listed. The authors make a strong point for introducing augmentative or alternative communication modes even when the child is likely to be verbal.

The final section, "Related Concerns," highlights issues in health, managing learning time, and working with families. Chapter 16, "Working with Families in Early Intervention," includes a respectful discussion of the challenging role of the parents of the handicapped child. An emphasis is placed on examining the attitudes about early intervention and the demands placed on families by well-meaning therapists and teachers. Strategies for empowering parents are outlined. Although this philosophy of empowerment is evident throughout the book, it is most strongly stated in Chapter 16.

In summary, *Implementing Early Intervention* is a highly readable text with thoughtful discussions and practical strategies for ensuring that all components of early intervention for children and their families are suitably addressed. It is highly recommended as a reference for those interested in the development, implementation, and evaluation of early intervention programs.