

INTRODUCTION and ACKNOWLEDGEMENTS

Introduction to the Research and Researchers

The initial development and implementation of these Health Literacy Materials, experimentally tested using a randomized design, was the direct result of competitive federal funding for adult literacy research. These materials meet both the need of adults to enhance their literacy skills as well as their need to navigate the health care system and begin to achieve better health care for themselves and their families. They integrate literacy skills and practice with pertinent health information. This type of work helps to support a significant public health need given the potential for higher annual healthcare costs and lower long term health outcomes for this group. According to the AMA Foundation (2007), adults with low literacy skills experience up to four times the annual healthcare costs of those with higher literacy.

In a scientifically-based research environment, use of these materials led to increased participants' literacy scores on standardized tests used to validate literacy gains. And, equally as important for these adult learners, it significantly increased health literacy and knowledge. The study experimentally tested and worked with 1,946 adults in Illinois programs over a period of 5 years. I, and our research team listed below, are proud that the National Institute for Literacy, its LINCS Region III Resource Center, and Meg Schofield have expanded and enhanced the usability of the materials for the instructor and learner, created an Instruction Guide to further assist adult educators, and made the free dissemination of this work possible. All of us are looking forward to the wide use of these materials and guide. *Susan R. Levy, Principal Investigator*

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Introduction to the use of Scientifically-Based Reading Research (SBRR) In the Health Literacy Project

The Health Literacy Project was designed to provide important health information to adults, while simultaneously providing effective literacy skill instruction. The materials presented on this website are specifically intended for Beginning ABE and Beginning ESL learners, and the strategies they employ to develop and strengthen the components of the reading process are those proven effective with these groups.

Seminal work by Susan McShane and John Kruidenier on scientifically-based reading research (SBRR) in teaching adults to read supports the strategies used in the Health Literacy Project. For more detail, please see McShane's (2005) *Applying Research in Reading Instruction for Adults: First Steps for Teachers*.

The basic components of the reading process are:

1. Alphabets (phonemic awareness and phonological decoding)
2. Fluency
3. Vocabulary
4. Comprehension.¹

A brief description of these four components, including some examples of instructional strategies is provided.

PRINT-BASED COMPONENTS

1. *Alphabets*—This term refers to the skills required to use letters to represent the sounds of language. Alphabets skills include both phonemic awareness and phonological decoding.

Phonemic Awareness – the ability to detect and manipulate phonemes (the smallest units of language sounds)

Instructional strategies include:

- Phoneme isolation— Helping students “pull off” the first sound they hear in a word. For example, “What is the first sound in Wednesday?” /w/
- Phoneme sequencing—Helping students recognize and sequence the individual sounds in words. For example, “chill” has 3 phonemes: /ch/ /i/ /l/
- Phoneme blending—Helping students combine a sequence of separately spoken sounds to make a recognizable word. For example, “What is this word: /k/ /o/ /f/?” (cough)

¹ McShane, S. (2005). *Applying research in reading instruction for adults: First steps for teachers*. National Institute for Literacy, the Partnership for Reading (Washington, DC). Developed for The National Center for Family Literacy and Kruidenier, J. (2002). *Research-based principles for adult basic education: Reading instruction*. National Institute for Literacy, U.S. Department of Education and National Institute of Child Health and Human Development, U.S. Department of Health and Human Services. Washington, DC.

Phonological Decoding (Phonics)- the ability to use letter-sound correspondence to recognize words in print. Phonics is an instructional approach that helps readers decode or pronounce words independently. For beginning level (and many intermediate level) learners, SBRR underscores the effectiveness of combining phonemic awareness and systematic phonics instruction when deficits in these areas are identified.

Instructional strategies include:

- Direct, explicit instruction in letter-sound relationships, particularly consonants ('m' says /m/; 'p' says /p/) and digraphs ('sh' says /sh/).
- Practice orally breaking words down into their syllables or beats, to make tackling multi-syllable words easier. For example: pre-scrip-tion (three beats).
- Direct, explicit instruction in common syllable patterns or types, for example consonant-vowel-consonant (leg, hip, neck); vowel-consonant-e (ate, time, nose); r-controlled vowels (arm, hurt); vowel teams ("ai" in nail; "oa" in throat).
- Direct, explicit instruction in common spelling patterns. For example, a lesson might focus on hard vs. soft "c": calendar /k/ vs. city /s/, or on dropping the final 'e' to add 'ing': take, taking
- Direct, explicit instruction in the structural analysis of words: plurals (s, es), verb endings (s, ing, ed), common prefixes (re, un, anti, pre, ex, non)
- Memorization of common, high frequency sight words which don't "play fair" phonetically. For example: the, of, to, was, there, blood, weight.

The Health Literacy materials provide opportunities for students to practice phonemic awareness and phonics skills in the context of health-related information. In most sections there are activities in which students practice chunking syllables from 2-syllable (symptom, urgent), 3-syllable (infection, examine), 4-syllable (practitioner, temperature), and 5-syllable words (antibiotics, postoperative). In related phonics activities, students are asked to supply the missing syllable (either orally or in writing) from such words.

Instructors are advised to analyze selected words on the board with students, in order to review and reinforce their phonemic, phonologic and syllabic properties.

Accompanying instructor video clips demonstrate a multi-sensory technique for highlighting vowels by printing them in a different color to assist students in recognizing syllable types and patterns. The video clips also demonstrate how students are encouraged to decode longer words one syllable at a time by underlining syllables in a scooping motion from left to right. (Note: Many of the phonics exercises are based upon knowledge of the Six Syllable Types found in English, as seen in Orton-Gillingham-based explicit language learning programs. The Health Literacy materials are not intended in any way to be a substitute for explicit, systematic language programs; rather it provides activities and exercises for learners and instructors which support such programs.)

Each section also contains a list of sight words. An accompanying video clip demonstrates a multi-sensory technique which students can learn to use to master sight words for reading and spelling. “On sight” or instant recognition of these high frequency words is an essential building block for fluent reading.

2. Fluency—This term refers to the ease, accuracy, and expression of reading. Fluent readers are skilled at identifying words and can read with appropriate phrasing and intonation.

Instructional strategies include:

- Reading to the instructor –learner reads aloud; instructor provides help as needed.
- Echo reading—instructor reads a sentence and the learner repeats it, imitating phrasing.
- Dyad and choral reading—instructor and learner read same passage aloud at same time. Instructor provides a model for fluent and expressive reading.
- Paired or partner reading—pairs of learners take turns reading and re-reading the same passage.
- Tape-assisted reading—learners can work independently, reading along while listening to a page on tape.

The Health Literacy materials provide two reading passages for each of the 18 sections: an expository, informational passage and a corresponding beginner-level (GE 2-3) story. Using the strategies above with these texts will assist readers to become more fluent, which will in turn assist with comprehension.

In addition, several activities have been built in to provide further opportunities for beginning level students to strengthen fluency through multiple exposures to and rereading of texts. These include:

- Beginner Cloze exercises (which entail re-reading the Beginner Level Story)
- A writing activity called “Copy the Phrase” that concentrates on repetition at the phrase level
- Comprehension activities that entail rereading and sequencing key sentences from the Beginner Level Story
- Re-reading of student-generated language experience stories

MEANING-BASED COMPONENTS

3. Vocabulary—This term refers to knowledge of word meanings—including oral vocabulary and reading vocabulary. Levels of vocabulary differ-- from not knowing a word, to recognizing a word, to knowing something about the word and relating it to a situation, to knowing the word well enough to explain and use it. Knowing the meaning of words and concepts is critical to understanding the writer’s message.

Instructional strategies include:

- Pre-teach words. Find unfamiliar words and introduce them to the learners.
- Ensure multiple exposures. Use words that are relevant.
- Teach word analysis, for example: common prefixes, suffixes and roots.
- Model how to use context clues (using nearby words to help identify or define the word).
- Teach “Signal words,” for example: therefore, but, however;
- Teach idioms, for example: couch potato, gung-ho, cold turkey, run down
- Teach subject-matter words specific to the material, for example: x-ray, paramedics, vomiting, hepatitis, vaccine, glucose, insulin, immunizations.

The Health Literacy materials include Core Vocabulary words directly related to health issues in each section. Basic illustrations are provided for all of the Core Vocabulary words and terms. The illustrations are grouped thematically. These visual cues are designed to strengthen students’ vocabulary development and comprehension.

Many ABE students may already be familiar with the meanings of these words, but may not necessarily be able to read them. Therefore, instructors are encouraged to make a quick oral check of students’ knowledge and only teach terms that are not already in their students’ oral vocabularies. Ample opportunities are provided for students to practice Core Vocabulary words and see them in use in the leveled texts and cloze exercises. The materials include multiple choice vocabulary quizzes which combine illustrations with written words and terms. Flashcards showing graphics of all Core Vocabulary terms, both with and without the corresponding labels, are provided for beginning ESL students.

The materials also include Supplemental Vocabulary Words which are not necessarily health related (e.g. avoid, proactive, sarcastic). These are useful words which may either appear in, or come up orally in discussions about the passages.

4. Comprehension—This term refers to accurately understanding what you read. Good readers are active and intentional, constructing meaning from the text and their own prior knowledge. Comprehension involves interacting with the text. Comprehension depends on the other components—alphabetic, fluency and vocabulary.

Instructional strategies include:

- Comprehension Monitoring—help learners monitor their understanding and identify areas when comprehension breaks down, such as when they don't know a word. Instructors can ask learners to restate, ask questions, and take notes.
- Graphic Organizers—diagrams or charts that visually represent the relationship of ideas and information. For example, family trees, time lines, cause and effect relationships.
- Discussing Story Structure—the who, what, where, when, how; characters, setting, problem.
- Question and Answering—Teachers ask questions during and/or after reading. Questions can be factual, inferential, or drawing conclusions. Post-reading questions can ask learners to relate. *For example, “Can you relate to her experience? Do you read medicine labels? What would you do if you didn't fully understand them?”*
- Question Generating—Learners ask and answer questions about their own learning. Teachers can prompt this. For example, prior to the section on Preventive Care, ask “Why might someone (including you or your family members) go to a health professional when they **aren't sick**?” or prior to the section on Emergencies, “Have you or anyone you know ever had a health emergency? What was the emergency? What did people do to help the patient?”
- Summarization—contains the essential ideas of a longer passage. The intent is to help the learner identify the main idea of a paragraph or section. There are numerous strategies for summarization. Discussion after reading allows learners to identify the main ideas. Modeling think-aloud is a good way to help learners identify the main idea.

The Health Literacy materials provide many opportunities for learners to improve their comprehension skills. Foundation skills in alphabets and vocabulary are provided to ensure learners are prepared for the texts. Each reading passage begins with provocative questions that serve as advanced organizers. Numerous examples of guided reading strategies are provided in the Instruction Guide to make sure students are actively involved in the reading process. Each section provides questions for discussion that invite the learner to relate the story to personal experience and ask higher level thinking skills.

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The National Institute for Literacy, a federal agency, provides leadership on literacy issues, including the improvement of reading instruction for children, youth, and adults. In consultation with the U.S. Departments of Education, Labor, and Health and Human Services, the Institute serves as a national resource on current, comprehensive literacy research, practice, and policy.

The U.S. Department of Education's Office for Vocational and Adult Education administers, coordinates, and recommends policy for improving quality and excellence of programs that are designed to prepare students for postsecondary education and careers; provide opportunities to adults to increase their literacy skills; and promote identification and dissemination of effective practice in raising student achievement in high schools, community colleges and adult education programs.