

NIDRR Projects

## Research in the New Millennium

**Assistive Technology and Adult Literacy: Bridging the Gap for Adults with Learning Disabilities**, *Heidi Silver-Pacuilla* (H133F020025) led by Heidi Silver-Pacuilla. Ellen Blasiotti, Project Officer.

Abstract: This project investigates whether assistive technology access and instruction improves the literacy skills and goal attainment of adult students with learning disabilities, when combined with regular adult basic education classes. A participatory action research (PAR) design seeks reflective participant involvement at every level, incorporating personal reflection, group dialogue, negotiation of the emerging analysis, and social action in an ongoing, long-term commitment. The overall goals of this project are to: (1) investigate the effects of assistive technology on adult literacy learners' skill development and goal attainment, (2) investigate the personal and social impacts that participation has on the learners, and (3) make recommendations to the field of adult education on promising practices for the infusion of assistive technology into literacy instruction.

**Developing and Evaluating an Interactive Tool to Support Literacy Learning in Adolescents with Severe Speech and Physical Impairments**, *University of New Hampshire* (H133G990501) led by Karen Erickson, PhD and David Koppenhaver, PhD. Carol Cohen, Project Officer.

Abstract: This project creates a web-based tool, the Adolescent Literacy Learning Link (ALL-Link), which provides adolescents with Severe Speech and Physical Impairments (SSPI) with an innovative, literary learning environment. ALL-Link features age-appropriate reading and writing activities that are grounded in inclusive models of comprehension and composition that apply equally to people with and without disabilities. Projected outcomes of ALL-Link development include: (1) successful development and implementation of an innovative and interactive literacy-learning web site for adolescents with SSPI and their teachers; (2) wide dissemination of the site and parallel or related materials for classrooms without Internet access; and (3) project management that efficiently provides target groups with increased access to and use of the web site, related materials, and project findings.

**Online Instruction Tools for Teaching Mathematical Problem Solving to Learning Disabled Students**, *Learnimation* (ED-02-R-0012 (3-5)) led by Sarah Manning. Judith Fein, Project Officer.

Abstract: This project builds a bundled set of web-based validated intervention tools to improve mathematical problem-solving outcomes of middle school students with learning disabilities. Utilizing instructional strategies proven by educational researchers to be effective in addressing the needs of students with learning disabilities, this software application focuses on the full set of cognitive processes, metacognitive activities, and affective factors required to attain proficiency in mathematical problem solving. In order to develop students' mathematical problem solving skills, interventions designed to address this scope and sequence of skills and abilities is presented within the context of motivating, life-based animated word

problems. The application teaches general problem-solving strategy and explicit cognitive mathematical sub-skills.

**ABC-Link: A Web-Based Literacy Assessment Tool for Students with Significant Disabilities**, *University of North Carolina at Chapel Hill* (H133G020133) led by Karen Erickson, PhD. Joyce Y. Caldwell, Project Officer.

Abstract: This development project is designed to create a web-based assessment tool, ABC-Link, that provides accessible reading assessment tasks via an innovative interface that simultaneously supports students with severe speech and physical impairments (SSPI) and the adults who assess them. Through its use of state-of-the-art technology, ABC-Link is an interactive site that: (1) guides the assessment as it progresses based on a model of behavioral and test-administration efficiency, (2) feeds the assessment results back to an expert team for interpretation, (3) guides the adult in conducting further assessment as necessary, and (4) provides a suggested plan of intervention.

**Middle School Phonemic Awareness Study**, *George Mason University* (H133G000142) led by Barbara Given, PhD. Richard Johnson, EdD, Project Officer.

Abstract: This project focuses on the role of phonemic awareness in adolescents with low reading skills, in two primary areas of concentration. The first focuses on a cost/benefit analysis of a computer-driven phonemic awareness program of elongated tones and speech sound called Fast ForWord (FF). FF intervention has

been provided during school, after school, while adolescents attended a summer camp alternative to summer school, and in speech and language clinics. The second area of concentration identifies psychophysiological differences in low readers as a result of phonemic awareness, word recognition, and reading comprehension instruction provided by teachers during school hours. This in-school EEG/ERP/phonemic awareness and reading project includes four groups of sixth graders reading below fourth grade level.

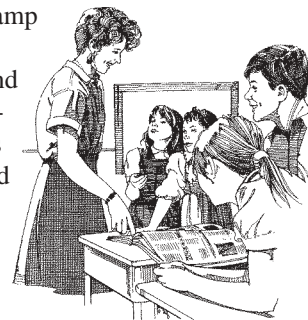
Find out more at [mason.gmu.edu/~bgiven](http://mason.gmu.edu/~bgiven)

**Development of a Prototype Illustration-Based Computer Textbook for LD/LEP Students**, *Visibooks, LLC* (H133S020101) led by Chris Charuhas. Bonnie D. Jones, EdD, Project Officer.

Abstract: This project develops computer textbooks for people with learning disabilities (LD) and limited English proficiency (LEP). Current text-heavy computer textbooks make it difficult to learn computer subjects. Visibooks develops simple, illustration-based computer books that have been well received by people with dyslexia and those just learning English. By refining and expanding this approach, Visibooks is developing computer textbooks tailored to the exact needs of LD/LEP learners.

Find out more at [www.visibooks.com](http://www.visibooks.com)

As schools prepare their Summer reading lists, RehabWire looks at projects and reports focusing on literacy and reading skills.



## Selections from REHABDATA

Lewis, S., Tolla, J. (2003) **Creating and using tactile experience books for young children with visual impairments.** *Teaching Exceptional Children*, 35(3), 22-28. Accession Number: J44960.

Abstract: Article examines the use of tactile experience books to encourage the development of reading skills in children with visual impairments. In tactile experience books, artifacts from events experienced by the child are actually incorporated onto the pages of a book. Each page also includes Braille and print text. Guidelines for creating and using tactile experience books, as well as benefits and cautionary notes, are discussed.

Al Otaiba, S., Smartt, S. M. (2003) **Summer sound camp: Involving parents in early literacy intervention for children with speech and language delays.** *Teaching Exceptional Children*, 35(3), 30-34. Accession Number: J44961.

Abstract: The authors introduced Summer Sound Camp to provide early literacy training to parents of children with speech and language delays. Program goals included: (1) helping parents understand the importance of phonological awareness, (2) providing them with commercially available research-validated teacher training materials, and (3) teaching them how to use the materials. Overall, parents found the activities to be very helpful and the children significantly improved their understanding of word and letter sounds.

Uberti, H. Z., Scruggs, T. E., Mastropieri, M. A. (2003) **Keywords make the difference! Mnemonic instruction in inclusive classrooms.** *Teaching Exceptional Children*, 35(3), 56-61. Accession Number: J44964.

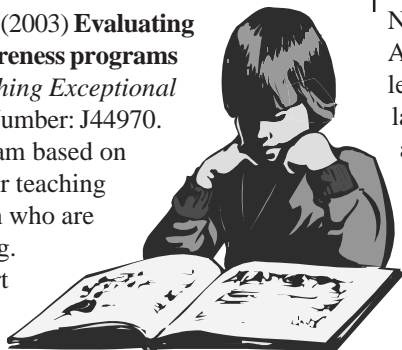
Abstract: A special education teacher describes her experience with the keyword method of instruction. Students in three inclusive third-grade classes were taught vocabulary words using three different methods: (1) verbal definition only, (2) definition plus a representational picture, and (3) definition, picture, plus a key word. In the keyword condition, students with learning disabilities substantially increased their vocabulary learning, even slightly outperforming students without disabilities.

Cook-Sather, A. (2003) **Listening to students about learning differences.** *Teaching Exceptional Children*, 35(4), 22-26. Accession Number: J44969.

Abstract: Article presents student perspectives on learning and learning differences. Educators' and researchers' traditional and progressive definitions of learning and learning differences are discussed. The student views are grouped into the following categories: (1) reinforcing the traditional, (2) tensions with/in the traditional, and (3) embracing progressive values. Implications for educational policy and practice are discussed.

Wanzek, J., Bursuck, B., Dickson, S. (2003) **Evaluating the suitability of phonological awareness programs for children who are at risk.** *Teaching Exceptional Children*, 35(4), 28-34. Accession Number: J44970.

Abstract: Article describes a program based on mediated scaffolding techniques for teaching phonological awareness to children who are at risk for having difficulties reading. Mediated scaffolding is the support provided during initial instruction



and can be provided by content, the individual tasks, the materials, and by the teacher. Presents a checklist that includes various scaffolding components and lists programs that effectively incorporate examples of scaffolding in the instruction.

Williams, J. P. (2003) **Incorporating partner practice and writing and self-regulation into the theme scheme program.** *Teaching Exceptional Children*, 35(4), 70-73. Accession Number: J44975.

Abstract: Author describes two activities developed for use with the Theme Scheme, a listening and reading comprehension program for elementary and middle school children at risk for academic failure. The first activity, Partner Practice, is patterned after peer-assisted learning strategies. The second activity, Writing and Self-Regulation, is derived from Self-Regulated Strategy Development. Evaluation and outcomes of the program are discussed.

Winebrenner, S. (2003) **Teaching strategies for twice-exceptional students.** *Intervention in School and Clinic*, 38(3), 131-137. Accession Number: J44976.

Abstract: Offers strategies for teaching students who have exceptional abilities in some areas and equally exceptional weaknesses in others. When teaching twice-exceptional students in their areas of strength, teachers should provide the same opportunities available to other gifted students. When teaching in areas of weakness, teachers should use the same compensation strategies used by other students with learning disabilities.

Scott, V. G., Weishaar, M. K. (2003) **Curriculum-based measurement for reading progress.** *Intervention in School and Clinic*, 38(3), 153-159. Accession Number: J44979.

Abstract: Outlines steps for developing and implementing curriculum-based measurement (CBM) to track reading progress in middle and high school students with disabilities. CBM in reading involves having students read aloud for one minute and counting the number of words read correctly. The steps presented include information on how to develop and organize a CBM, how to administer and score a CBM, how to use the information for instructional changes, and how to use the data collected to inform parents about their child's progress.

Scott, B. J., Vitale, M. R. (2003) **Teaching the writing process to students with LD.** *Intervention in School and Clinic*, 38(4), 220-224. Accession Number: J44985.

Abstract: Article presents a tool to help teachers guide students with learning disabilities through each stage of the writing process. The Writing Wheel displays the five stages of the writing process: prewriting, drafting, revising, editing, and publishing. Appropriate activities for each stage are presented and students and teachers use the wheel to monitor the writing process.

Matthews, D. D. (Ed.) (2003) **Learning disabilities sourcebook. Health Reference Series, Second Edition.** Omnigraphics, Inc. Accession Number: R08301.

Abstract: Book provides basic consumer health information about learning disabilities, including dyslexia, developmental speech and language disabilities, non-verbal learning disorders, developmental arithmetic disorder, developmental writing disorder, and other conditions that impede learning such as attention deficit/hyperactivity disorder, brain injury, hearing impairment, Klinefelter syndrome, dyspraxia, and Tourette syndrome. Provides facts about educational issues, assistive technology, and coping strategies. Includes a glossary of related terms, and listings of additional resources.