Science Informs Our Work:

Research-Based Adult Literacy Instruction

Anne Murr , M.S., Director

Drake University Adult Literacy Center

Des Moines, Iowa

anne.murr@drake.edu

About the Author: *Anne Murr is the Director of the Drake University Adult Literacy Center and has trained volunteer tutors in Des Moines Iowa. She has a degree in elementary and early childhood education, has been a Head Start teacher, and has a masters degree in adult learning. She is a NAASLN Board Member.*

As a practitioner-researcher who has been in the adult literacy field for seven years, my consistent question has been: How can we improve instruction for adults for whom previous literacy instruction and learning efforts have failed. After just a year of tutoring adults who struggle to learn to read, I discovered that adults were not making hoped-for progress when tutors used authentic text which required word recognition through memorization, guessing and guided phonics instruction. Instruction in word structure while writing letters to pen pals was very Òhit and missÓ. This instruction did not have the systematic intensity which learners needed to address their learning struggles.

I began reading research on why children fail to learn to read because the adults we serve failed to learn when they were children. This is what I have found in my reading of quantitative, i.e., scientifically based research:

Groundbreaking work in neuroscience informs educators about cognitive processes involved in translating speech to print and print to speech and how these mental processes do

not become automatic for one in five learners (Shawitz, 2003). Research has identified the differing cognitive processes of children and adults who fail to reach levels of functional literacy. Beginning with Isabella Liberman in the late1970Õs and continuing with Shaywitz, Paulesu, Richards, (see accompanying biblography) and others, brain scan technology reveals that persons who struggle to learn to read have brain activity patterns that differ from the brain activity patterns of competent readers. This brain-based difference manifests itself in the lack of perception of the speech sounds of which words are made, i.e., a lack of phonemic awareness, and great difficulty in combining and segmenting these sounds (phonological processing skills). Their brains are truly not wired to learn to read.

Quantitative researchers are able to separate distinct factors which influence learning, i.e., verbal and nonverbal I.Q., family and educational background and income, ethnicity, age and sex (Bus, A.G. & van Ijzendoorn. 1999). Through this process, scientifically-based research has determined that children and adults who lack adequate phonemic awareness and phonological processing skills fail to reach competence in literacy.

Pratt and Brady (1988) looked at reading skills of good and poor readers — children in the 3rd grade and adults in ABE classes. They found that both child and adult poor readers display deficiencies in phonological processing. In fact, the adults scored more poorly on the sounding-out tasks than did the children. Read and Ruyter (1985) found similar results when investigating good and poor readers in the 5th grade and adults in a Wisconsin prison. While the adults had more extensive banks of memorized non-decodable sight words, these adults also preformed more poorly than did the children on tasks measuring phonological processing skills. Read and Ruyter concluded that Òthe only hope seems to be in teaching these skills.Ó (p. 51)

My background and previous teaching experience was as an early childhood educator. When I began studies in an adult learning masters degree program, I asked whether or not adults and children learn in different ways. Perfetti and Marron (1995) concluded that children and adults have similar cognitive processes for learning to read. I have tutored both child and adult struggling readers, and agree with their assessment. I believe that we all learn best in the context of doing, through hands on experiences in a meaningful context. Developmentally appropriate instruction is necessary at ALL ages, not just for young children. If an adult does not know how sounds correspond to letters, it IS appropriate to teach that adult the sounds (phonemes) and how they blend and are segmented in words (phonological processing skills).

Five years ago at the Drake University Adult Literacy Center we began an informal screening process to determine each adultÕs literacy skills. Every adult, regardless of education or incoming reading level has demonstrated the lack of phonological processing skills identified in the scientific research. (This is our qualitative, observational research.) Several had earned a GED but have stated emphatically, ÒTake me back to the very beginning. I am tired of felling dumb with words!Ó

We began using direct, systematic instruction which activates learning with multisensory, hands on learning about how sounds and syllables combine as words. (We use the Wilson Reading System. There are other effective multisensory structured approaches as well.) Minimally trained volunteers have the materials and the structure to address the learning challenges of persons who have failed to learn to read through more traditional methods.

Experimental research also has investigated the effects of structured, direct, intensive instruction for children who are failing to learn to read. Children in the successful Reading Recovery program made greater reading gains when receiving direct instruction in phonological processing skills (Iverson and Tunmer, 1993). An intensive investigation into literacy learning in Title One reading classes found that the only children whose reading scores improved were those who received direct systematic instruction. (Foorman et. al., 1998)

There is a dearth of research on the effect of literacy instruction with adults. I am collecting data about our students and hope to have it compiled in the near future. For adults whose brains are not wired to process words efficiently, we have observed that they need intensive, structured multisensory practice – over time – in order to internalize word structure information. Our data indicates that, while some progress faster, on average, it takes an adult one year to improve one learning level. I have observed that adults in our Center do transfer their decoding skills into reading text at work, street signs and books that they read to their children. They have the background knowledge and experience to apply what they are learning within the structured tutoring setting to the broader context of their lives. One of the women that I tutor has a cleaning business. She is now able to read notes left for her by her employers so that she can clean exactly what they want her to. Her tearful comment when we began working on multisyllabic words was: ÒYou mean I donÕt have to be afraid of big words anymore?Ó

We do not yet have data to quantify the progress adults are making in improving their reading and writing skills, but we do have anecdotal reports. Here is what some of our adult new readers are saying about how their lives are changing as they make progress.

ÒI subscribe to the newspaper now and read every morning. I have more confidence now and can break down words I donÕt know. IÕm not scared to say something wrong anymore. Now I read to my grandchildren instead of them reading to me. I learn and I help them learn.Ó

ÒI can read 100% better. I donÕt panic like I used to. I can figure it out.Ó

ÒI can spell big words. I can write a complete thought.Ó

ÒI can pronounce vowels.Ó

ÒMy wife leaves me little notes now and I can read them.Ó

ÒI feel more comfortable filling out reports at work.Ó

ÒI enjoy reading now. I feel good about myself.Ó

ÒI passed the John Deere employment test. I can write a check now.Ó

ÒI read a book!Ó

ÒI read the manuals at work. I can fill out an application by myself.Ó
ÒI read the subtitles for [the movie] ÒHeroes!Ó

These substantive accomplishments are the result of learning through instruction which is based on principles from research. Research can and does inform our adult literacy practices.

Bibliography

Bell, L. & Perfetti, C. (1994). Reading skill: Some adult comparisons. Journal of Educational Psychology, 86, 244-255.

Bus, A.G. & van IJzendoorn. (1999) Phonological awareness and early reading: A meta-analysis of experimental training studies. Journal of Educationa.l Psychology, 91, 403-414.

Foorman, B., Francis, D., Winikates, D. (1997). Early interventions for children with reading disabilities. Journal of Scientific Studies of Reading, 3. 255-276.

Iverson, S. & Tunmer, W. E. (1993) Phonological processing skills and the reading recovery program. Journal of Educational Psychology, 85, 112-126.

Liberman, L. & Shankweiler, D. (1985). Phonology and the problems of learning to read and write. Remedial and Special Education, 6, 8-17.

Paulesu, E.; Demonet, J.F.; Fazio, F.; McCrory, E.; Chanoine, V.; Brunswick, N.; Cappa, S.F.; Cossu, G.; Habib, M.; Frith, C.D.; Frith, U. (2001) Dyslexia: Cultural diversity and biological unity. Science, 291:2165-2167.

Perfetti, C. A. & Marron, M.A. (1995). Learning to read: Literacy acquisition by children and adults. National Center on Adult Literacy, Technical Report TR95-07.

Pratt, A.C., Brady, S. (1988). Relation of phonological awareness to reading disability in children and adults. Journal of Educational Psychology, 80, 319-323.

Read, C. & Ruyter, L. (1985). Reading and spelling skills in adults of low literacy. Remedial and Special Education, 6, 43-52.

Richards, T., Corina, D., Serafini, S., Steury, K., Echelard, D., Dager, S., Marro, K., Abbott, R., Maravilla, K., Berninger, V. (2000) The effects of a phonologically-driven treatment for dyslexia on lactate levels as measured by proton MRSI. American Journal of Neuroradiology, 21, 916-922

Shaywitz, S. (2003). Ov*ercoming dyslexia. A new and complete science-based program for reading problems at any level.* New York: Alfred A. Knopf.

Shaywitz, S., Shaywitz, B., Pugh, K., Fulbright, R., Constable, R.T., Mencl, W.E., Shankweiler, D., Liberman, A., Skudlarski, p., Fletcher, J., Katz, L., Marchione, K., Lacadie, C., Gatenby, C., & Gore, J. (1998). Functional disruption in the organization of the brain for reading in dyslexia. Neurobiology, 95, 2636-2641.

Wilson, B.A. (2002). *Wilson Reading System*. Millbury, MA: Wilson Language Training

Corporation.