**STAR Resources, 2019**

Beyond the resources found on the STAR site,

those listed below may be of interest to STAR trainers and teachers.

*Click on the triangle next to each underlined heading to contract or expand that section’s list of resources.*

**Research Overviews:**

**Greenberg, D., Ginsburg, L., & Wrigley, H.S. (2017). Research updates: Reading, numeracy, and language education. *New Directions for Adult and Continuing Education, 155,* 83-94.**

Following a brief overview of research conducted over the past decade demonstrating adult readers’ lack of skill in phonological awareness, fluency, vocabulary, background knowledge, inferencing and memory, the authors identify the following as areas needing more research: digital literacy and sociocultural aspects of adult reading. With regard to numeracy, the research reviewed highlights a disconnect between school math and real-life numeracy practices, over-emphases on computation at the expense of conceptual understanding, and the positive contribution that working collaboratively in small groups can have on the development of mathematical understanding. Few studies in adult English acquisition were found that show what practices are effective in helping English learners become economically and socially integrated. However, recognized as important are: building content knowledge, taking advantage of past experiences and literacy in a first language, and accounting for the affective and sociocultural dimensions of language. Recent research has also revealed the barriers faced by college-educated immigrants with limited English skills.

**Mellard, D. (2013). Observations about providing effective instruction to adults with low literacy. *Perspectives on Language and Literacy, 39,* 13-16.**

An overview of the studies of adult literacy learners conducted by Mellard and his colleagues is presented and placed within the context of other related research. Conclusions reached include: low literacy levels and learning disabilities are pervasive among adults; instruction targeted toward learners’ needs may be required to improve adults’ reading levels; understanding learners’ motivation may be critical to informing instructional decisions and promoting retention; and oral reading fluency assessment may result in better instructional alignment for adult literacy learners.

**Adult Literacy Assessments:**

**Adults falling behind (December 2013/January 2014). *Phi Delta Kappa*, 6*.***

Key findings from the OECD’s PIACC study – an international comparison of literacy, numeracy, and problem-solving skills of 16- to 65-year olds – are presented. As stated in the article, “In the U.S., the literacy and numeracy skills of young people entering the labor market are worse than those who are ready for retirement. American 55- to 65-year-olds perform around average, but young Americans rank the lowest among their peers in all participating countries”.

**Desjardins, R. (2018, December 6). *Revisiting the determinants of literacy proficiency.* Paper presented at the 3rd PIAAC Research-to-Practice Conference, Arlington, VA. Retrieved March 21, 2019, from**

[**https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/5c1928fecd8366551dc39797/1545152766907/Final+1-page+summaries.pdf**](https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/5c1928fecd8366551dc39797/1545152766907/Final+1-page+summaries.pdf)

This study looked at which factors predict proficiency in literacy at both an individual and at a national level. The factors looked at included: gender, age, immigrant status, parents’ education, earnings, education, occupation, and literacy practices at work. The countries included were: Belgium, Czech Republic, Denmark, Finland, Germany, Ireland, Italy, Netherlands, Norway, Poland, Sweden, UK, and US. For individuals across all the countries, education was the most important predictor, followed by immigration status, parents’ education and type of occupation. Within countries, however, the importance of factors differed. For example, in countries like Sweden and Norway with many recent immigrants, immigration status was more important than in other countries. In the US and UK, parents’ education was more important, a connection that has increased over time in the US. The author concludes: “as educational systems are expanding access, they are having difficulties redressing inequalities emanating from the home background”.

**Fisher, D., & Frey, N. (2018). Reading and writing on screen and paper. *Journal of Adolescent & Adult Literacy, 62,* 349-351.**

This article reviews some of the research findings on the effects of medium (digital vs. print) on comprehension and learning. The majority of the studies reviewed involved students in middle school and beyond. The highlighted findings were:

* If scrolling is not required, medium does not affect comprehension. But when texts are longer (>500 words), comprehension is better with print. This has been found to be the case with both narrative and informational texts.
* Medium does not seem to affect comprehension performance at a general level. However, when comprehension requires dealing with more detailed and nuanced information, print is better.
* Reading online has been shown to lead to overconfidence in predictions of performance compared to reading on paper.
* Digital notetaking tends to contain a more verbatim representation of a lecture, while paper notetaking is characterized by a more conceptual representation.
* Notetaking medium does not seem to matter much for factual information. On conceptual items, paper is better.
* Prompting digital notetakers to stop transcribing does not improve their notes. Or their test performance.
* Studying handwritten notes before a test helps performance. Studying digital notes, along with not studying notes (regardless of medium) results in poor test performance.

**Goodman, M., Finnegan, R., Mohadjer, L., Krenzke, T., & Hogan, J. (2013). *Literacy, Numeracy, and Problem Solving in Technology-Rich Environments Among U.S. Adults: Results from the Program for the International Assessment of Adult Competencies 2012: First Look* (NCES 2014-008). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved May 5, 2014 from** [**http://nces.ed.gov/pubsearch**](http://nces.ed.gov/pubsearch)**.**

Goals, history, tasks, and selected findings from OECD’s 2011-2012 PIACC study are summarized. Compared with the US average score on the literacy scale for adults age 16 to 65, average scores in 12 countries were higher, in 5 countries lower, and in 5 countries not significantly different.

**Lane, J., & Murray, T.S. (2018). *Literacy lost: Canada’s basic skills shortfall.* Retrieved March 4, 2018 from** [**https://cwf.ca/research/publications/report-literacy-lost-canadas-basic-skills-shortfall/**](https://cwf.ca/research/publications/report-literacy-lost-canadas-basic-skills-shortfall/) **Calgary, Alberta: Canada West Foundation.**

Linking performances of Canadians on international literacy assessments with key economic indicators suggests that increasing the literacy skills of the lower scoring individuals will have more impact than improving the scores of the higher achievers.

**Mellard, D.F., Woods, K.L., Desa, Z.D.M., & Vuyk, M.A. (2015). Underlying reading-related skills and abilities among adult learners. *Journal of Learning Disabilities, 48,* 310-322.**

A group of 290 students from a Midwest Jobs Corp Center were tested with the TABE and CASAS and with measures assessing decoding/encoding, vocabulary, processing speed, and working memory. Participants’ average age was 20 years; 43% were White and 39% African American; and 68% were male. The group’s average CASAS raw score (Level C-Advanced) was 27; average TABE Standard Score was 570. When reading was measured by the CASAS, the most important variable in explaining differences in performance was working memory, followed by decoding/encoding, and then vocabulary. When TABE was the measure, vocabulary was the most important variable, followed by decoding/encoding. The authors conclude: “Students assessed using the CASAS must draw on Working Memory (e.g., attention to detail, short-term memory, and manipulation of the information into organized response) to demonstrate their functional literacy abilities. Alternatively, if student progress is measured by the TABE, then vocabulary needs to be instructionally emphasized” (pg. 319).

**Rampey, B.D., Keiper, S., Mohadjer, L., Krenzke, T., Li, J., Thornton, N., & Hogan, J. (2016). *Highlights from the U.S. PIAAC Survey of Incarcerated Adults: Their skills, work experience, education, and training: Program for the International Assessment of Adult Competencies: 2014* (NCES 2016-040). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved February 13, 2017 from http://nces.ed.gov/pubsearch.**

Profiles and skills of incarcerated adults participating in PIAAC were compared with those of non-incarcerated adults from the main PIAAC household assessment. 93% of the prison test takers were male, compared to 49% in the household assessment. Prison test takers were 34% White, 37% Black, and 22% Hispanic compared to 66% White, 12% Black, and 14% Hispanic for the household sample. 35% of the prison sample were aged 25-34 and 24% were 34-44; in the Household sample, both age groups were 18%. 64% of the prison sample reported having a high school credential as their highest level of attainment, compared to 50% in the household survey. 29% of the prison sample scored below Level 2 in literacy, compared to 19% in the household sample. However, average literacy scores for incarcerated adults did not differ from their household peers with the same level of educational attainment.

**Schwerdt, G., Wiederhold, S., & Murray, T.S. (2018, December 6). *Literacy and growth: Policy implications of new evidence from PIAAC*. Paper presented at the 3rd PIAAC Research-to-Practice Conference, Arlington, VA. Retrieved March 21, 2019 from** [**https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/5c1928fecd8366551dc39797/1545152766907/Final+1-page+summaries.pdf**](https://static1.squarespace.com/static/51bb74b8e4b0139570ddf020/t/5c1928fecd8366551dc39797/1545152766907/Final+1-page+summaries.pdf)

Results from PIAAC (the Programme for the International Assessment of Adult Competencies) were used to gauge the impact that differences in literacy levels can have on a nation’s economic activity. Countries with larger proportions of adults scoring at the lower proficiency levels on PIAAC seemed to experience less economic activity than those with smaller proportions. However, differences among countries in the proportion of adults at the higher literacy levels did not appear to have an impact on economies. The authors suggest that: “Countries that manage to raise their average literacy skill levels by improving the literacy levels of low skilled workers will realize even higher levels of downstream growth”.

**Assessment of Components of Reading:**

**Barnes, A.E., Kim, Y-S., Tighe, E.L., & Vorstius, C. (2017). Readers in adult basic education: Component skills, eye movements, and fluency. *Journal of Learning Disabilities, 50,* 180-194.**

Accuracy, rate, and eye movements during oral reading were recorded in a diverse sample of 48 mostly native English speaking adults with TABE scores averaging about the 6th grade level. The passages used were at the 3rd-5th grade reading level. Compared to what prior research has found with skilled adult readers, the eye movements of these participants were characterized by slightly longer fixations, shorter saccades, and a higher rate of rereading. Reading fluency (as estimated by words correct per minute) was correlated with reading comprehension (as measured by the TABE and WJ-III), and the less fluent readers’ eye movements were more affected by low frequency words than were those of the more fluent readers. The authors recommend that “…education for adults with low literacy skills should provide for explicit instruction in decoding strategies and reading fluency along with comprehension instruction” (pg. 191).

**Binder, K.S., Tighe, E., Jiang, Y., Kaftanski, K., Qi, C., & Ardoin, S.P. (2013). Reading expressively and understanding thoroughly: An examination of prosody in adults with low literacy skills. *Reading and Writing: An Interdisciplinary Journal, 26,* 665-680.**

Comparison was made between the oral reading of a narrative text (at about the 6th grade level of difficulty) by ABE learners and college students. ABE learners paused longer between words and more frequently at inappropriate points than the college students did. In addition, ABE learners showed less variation in pitch than did the college students. Among the ABE learners, the prosody measures accounted for a significant amount of variance in their reading comprehension.

**Braze, D., Katz, L., Magnuson, J.S., Mencl, W.E., Tabor, W., Van Dyke, J.A., Gong, T., Johns, C.L., & Shankweiler, D.P. (2015). Vocabulary does not complicate the simple view of reading. *Reading and Writing.* DOI10.1007/s11145-015-9608-6. Retrieved from** [**http://link.springer.com/article/10.1007/s11145-015-9608-6**](http://link.springer.com/article/10.1007/s11145-015-9608-6)

According to the “simple view” of reading, skill in reading comprehension depends on two factors: the ability to identify words in print (measured by decoding skill) and the ability to understand language (measured by listening comprehension). Questions have been raised, however, about whether knowledge of word meanings should be considered a third factor. In this study, adults with a wide range of reading ability were assessed on their decoding, vocabulary, and listening comprehension ability. Although vocabulary was found to capture a small, but significant proportion of variance in reading comprehension beyond that explained by decoding and listening comprehension, other analyses did not support identifying vocabulary as independent from overall language comprehension. However, the authors conclude: “…training to improve vocabulary knowledge is an important lever that can be used to drive gains in general language comprehension, which has been demonstrated repeatedly to have an extremely high association with reading skill”.

**Fracasso, L.E., Bangs, K., & Binder, K.S. (2016). The contributions of phonological and morphological awareness to literacy skills in the Adult Basic Education population. *Journal of Learning Disabilities, 49,* 140-151.**

Skills in decoding (being able to correctly pronounce nonwords) and morphological awareness (knowing how words are built) of 63 ABE students were compared to their abilities in spelling, vocabulary, and listening and reading comprehension. Of the students, 10 were beginning level readers, 20 were intermediate, and 33 were advanced. Reading and listening comprehension were assessed with sentence level tasks. Morphological awareness was a unique predictor of spelling, vocabulary, and listening comprehension. Decoding was a unique predictor of spelling and listening and reading comprehension. Morphological awareness was related to reading comprehension via vocabulary.

**Hall, R., Greenberg, D., Laures-Gore, J., & Pae, H.K. (2014). The relationship between expressive vocabulary knowledge and reading skills for adult struggling readers. *Journal of Research in Reading, 37 (S1),* S87-S100.**

The relationships among word and nonword reading, expressive vocabulary, and reading comprehension were examined in 232 native English speaking adults reading at the 3rd-5th grade levels. Decoding was assessed with word and nonword reading tasks. To assess expressive vocabulary, participants were asked to provide the names of pictured objects (e.g., *bed, toothbrush, seahorse, dart*). Comprehension was assessed with a fill-in-the-blank/cloze task. Expressive vocabulary accounted for significant differences in reading comprehension and the ability to read irregularly spelled words (e.g., *ocean, island, recipe, dough*). The authors recommend “a balanced approach to reading instruction that incorporates word-reading skills, fluency activities, vocabulary development and reading comprehension” (pg. S97).

**Herman, J., Cote, N.G., Reilly, L., & Binder, K.S. (2013). Literacy skill differences between adult native English and native Spanish speakers. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 2,* 142-155.**

Reading skills of native English and native Spanish-speaking ABE learners were compared in 4 areas: phonology (assessed with nonsense word decoding); morphology (assessed with tasks requiring facility with word parts affecting meaning); vocabulary (assessed with a receptive meaning task); and comprehension (assessed with a sentence cloze task). While no differences were found between the groups on the phonology or vocabulary tasks, native English speakers performed significantly better on the morphology and comprehension tasks than the native Spanish speakers did. Morphological awareness accounted for more variance in vocabulary and comprehension among native Spanish speakers than it did among native English speakers. The correlation between vocabulary and comprehension was also much stronger among native Spanish speakers (r=.65) than it was among native English speakers (r=.34).

**McKoon, G., & Ratcliff, R. (2016). Adults with poor reading skills: How lexical knowledge interacts with scores on standardized reading comprehension test. *Cognition, 146,* 453-469.**

Among the goals of this research were to better understand what standardized tests of reading comprehension measure and what underlies the difficulties of adults who score low on them. Adult native English speakers with TABE scores ranging from the 4th-7th grade levels (n=124) were shown strings of letters (e.g.,”trade”; “trude”) and asked to decide as quickly and accurately as possible whether the letter strings represented a word or not. Results showed that learners’ TABE performance was significantly related to how well they performed on this task. Speed and accuracy in making decisions about the letter strings were not significantly correlated with each other, however. In other words, knowing that learners have the same accuracy does not necessarily mean they have the same skills because their rate can be different.

**McKoon, G., & Ratcliff, R. (2017). Adults with poor reading skills and the inferences they make during reading. *Scientific Studies of Reading, 21,* 292-309.**

Predictive inferences are ones that readers make about what will happen next in an episode or story. These kinds of inferences are also ones that skilled readers make quickly and automatically during reading. In this study, the predictive inferencing ability of a group of adult literacy learners (mean grade level score on the TABE = 6.6) was compared with that of college undergraduates. Although the less-skilled readers were slower and less accurate that the skilled readers, taking speed/accuracy tradeoffs into account showed that the degree to which adult literacy learners make predictive inferences did not differ significantly from college students.

**McKoon, G., & Ratcliff, R. (2018). Adults with poor reading skills, older adults, and college students: The meanings they understand during reading using a diffusion model analysis. *Journal of Memory & Language, 102,* 115-129.**

Comprehension requires knowing which aspects of a word’s meaning are relevant to understanding a text and which are not. For example, when reading a sentence like “*The painter searched many stores to find the color most suited to use in painting the ripe tomato”*, recognizing that tomatoes are red is relevant, whereas knowing that tomatoes are round is not. Accuracy and speed in making decisions about contextually relevant meanings were assessed in 3 groups: college students, older adults (mean age = 71 years), and adult literacy learners (mean grade level on the Test of Adult Basic Education = 6.9). Accuracy was about the same among college students and older adults while the literacy learners were less accurate. College students were faster than the older adults, who were in turn faster than the literacy learners. Despite these group differences, however, when accuracy and speed of responses to contextually relevant information were looked at together, results showed that adult literacy learners knew which aspects of meaning were relevant.

**Mellard, D.F., Fall, E.E., & Woods, K.L. (2013). Relation and interactions among reading fluency and competence for adult education learners. *Learning Disabilities Research & Practice, 28,* 70-80.**

The impact of reading rate and accuracy for ABE/ASE learners at all 6 levels were compared on two different kinds of comprehension tasks: one approximating academic reading (as measured by the WRMT-R) and one approximating functional reading (as measured by the CASAS). For academic reading, oral reading errors hurt the comprehension performance of slower readers more than faster ones, while for functional reading, the opposite was true.

**Murphy, M. (2014). *Which component reading skills predict reading comprehension gains in adult literacy students?* (Doctoral dissertation). Available from ProQuest Information & Learning. (Publication No. AAI3567315)**

This study looked at the relationship between adult literacy students' decoding, vocabulary, fluency, and spelling and their gains in reading comprehension from pretest to posttest. Skill in decoding and vocabulary were significant predictors of gains in reading comprehension. Teacher knowledge about fluency instruction, vocabulary instruction, and reading comprehension instruction was also a significant predictor of gains in reading comprehension. Learners between 40 and 53 years showed less improvement in reading comprehension than both younger and older students did.

**Muth, B., Sturtevant, E., & Pannozzo, G. (2017). Performance and beliefs: Two assessments of literacy learners in prison, Part I. *The Journal of Correctional Education, 68(1),* 71-96.**

Diagnostic reading tests were administered to 120 federal prisoners to investigate their reading profiles. Participants were selected to represent beginning level learners (38%), intermediates (30%), and advanced (32%). The majority were male (88%), African American (71%), and native English speakers (85%). Statistical analyses revealed four factors: print (phonemic awareness, word attack, and recognition of words in and out of context); meaning (oral expressive and receptive vocabulary); naming speed/rate (letter naming speed and oral reading rate); and memory (verbal short-term and working memory). Comprehension split evenly between the print and meaning components. Three distinct patterns among the four factors emerged:

* P=M: a flat profile, which fit 59% of the total sample, including learners who scored the lowest overall, as well as those who scored the highest; the majority with this profile were learners at the intermediate level, however (38% of the total sample)
* P<M: learners with this profile (22% of the total sample) reported experiencing reading difficulties as early as elementary school; most with this profile were at the beginning level (17% of the total sample)
* P>M: learners with this profile (24% of the total sample) were all at the intermediate level; the majority of the non-native English speakers in the sample (63%) also had this profile

While agreeing that their results support the use of diagnostic testing as a way to improve reading instruction, the authors also urge that test results be contextualized “within more holistic understandings of learners provided by the prisoners themselves” (pg. 90).

**Nanda, A., Greenberg, D., & Morris, R. (2014). Reliability and validity of the CTOPP elision and blending subtests for struggling adult readers. *Reading and Writing: An Interdisciplinary Journal, 27,* 1603-1618.**

The phonological awareness of 207 native English speaking adults reading between the 3rd-5th grade levels was assessed using elision and blending tasks. In elision tasks, a learner hears a word (e.g., *“cat”*) and is then asked to say the word without one of its sounds (e.g., “*/k/”*). In blending tasks, the learner hears some sounds (e.g., “*/k//a//t/”*) and is then asked to combine the sounds to form a word (e.g., “*cat”*). As assessed by the elision and blending tasks on the Comprehensive Test of Phonological Processing (CTOPP), the scores of the adults in this study corresponded to grade equivalencies below the 3rd grade level. The authors raise concerns about administering and interpreting the elision and blending subtests of the CTOPP with struggling adult readers.

**Nightingale, E., Greenberg, D., Branum-Martin, L., & Bakhtiari, D. (2016). Selecting fluency assessments for adult learners. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 5,* 18-29.**

Fluency in 116 native English speaking literacy learners (81% of whom identified as African American/Black) was assessed with 4 measures:

* Test of Silent Word Reading Fluency – where learners presented with rows of words, ordered by difficulty and without spaces in between, must draw lines between word boundaries
* Test of Silent Word Contextual Reading Fluency – same as above, except words are presented in passages
* Test of Word Reading Efficiency – learners are asked to read aloud a list of words and pronounceable nonwords
* Woodcock Johnson Reading Fluency – after silently reading a sentence, learners indicate whether each sentence is true

Participants demonstrated low skills on every measure (with mean grade equivalents ranging from 2.2 to 5.2). However, correlations among scores on the tests varied quite a bit, leading the authors to recommend that care be taken when reading studies about struggling adult readers’ performances on reading fluency tests, and when selecting reading fluency measures.

**Rasinski, T.V., Chang, S-C, Edmondson, E., Nageldinger, J., Nigh, J., Remark, L., Kenney, K.S., Walsh-Moorman, E., Yildirim, K. Nichols, W.D., Paige, D.D., & Rupley, W.H. Reading fluency and college readiness. *Journal of Adolescent & Adult Literacy, 60,* 453-460.**

A sample of 81 incoming college freshmen education majors volunteered to be assessed (80 were female) reading aloud a 443-word excerpt from “The Legend of Sleepy Hollow” (Dale-Chall readability score of 8.5). Word recognition accuracy and rate were recorded. Participants were asked to read orally in their normal reading voice, and following the reading, participants were asked a literal-level question (to assure they were reading for meaning, not speed). Word recognition accuracy was high (ranging between 96-98%) and average reading rate was about 150 words correct per minute. The authors note that this rate is about the same as what is expected in 8th grade, suggesting to them that “once students achieve a certain level of automaticity (say, 150-160 WCPM on grade-level materials), further increases in automaticity as measured by oral reading rate should not be a priority” (pg. 458). WCPM was also found to be moderately correlated with ACT reading subtest scores (r=.52), with the following rates associated with various scores:

|  |  |
| --- | --- |
| **ACT reading subtest score** | **WCPM** |
| 19 | 101 |
| 20 | 112 |
| 21 | 123 |
| 22 | 134 |

**Sabatini, J. (2015). *Understanding the basic reading skills of U.S. adults: Reading components in the PIACC literacy survey.* Princeton, NJ: Educational Testing Service. Retrieved from** [**http://www.ets.org/s/research/report/reading-skills/ets-adult-reading-skills-2015.pdf**](http://www.ets.org/s/research/report/reading-skills/ets-adult-reading-skills-2015.pdf)

Results from the Programme for the International Assessment of Adult Competences (PIACC) have shown that about one out of six adults in the US read at a beginning level (scoring at or below Level 1 on PIACC’s literacy scale). To gain a better understanding of the reading skills of the lowest scoring adults, this study assessed their performance on 3 tasks: print vocabulary (identifying meanings of high frequency printed words), sentence processing (evaluating meanings of single sentences), and passage comprehension (reading for meaning in simple paragraphs). The average score across the 3 tasks for US adults scoring below Level 1 was 59% correct; the average score at Level 1 was 78%. Accuracy differences were also reflected in time to complete the tasks. Native and non-native English speakers were found to differ in their performances across the 3 tasks. Below Level 1, native speakers averaged 76%; non-native speakers averaged 47%. At Level 1, native speakers averaged 86%; non-native speakers averaged 65%. The results were viewed as “consistent with the claim that fluent, efficient basic skills in reading are the basis for developing more advanced literacy skills” (pg. 34).

**Sabatini, J., O’Reilly, T., & Wang, Z. (2018, July). *Comparing adult to adolescent performance on component assessment of reading.* Paper presented at the Society for Scientific Studies of Reading Conference, Brighton, UK.**

The reading skills of 309 adult literacy learners were assessed with Study Aid & Reading Assessment (SARA), a computer-administered battery with subtests measuring word recognition and decoding, vocabulary and morphology, fluency, and sentence and text processing. Compared to students in grades 5-8, the adults demonstrated the most difficulty on the word recognition and decoding tasks, followed by the fluency, then sentence processing, then vocabulary and morphology, and finally text comprehension. The authors concluded that this group of adult literacy learners employed top-down processing strategies, perhaps to compensate for weaknesses in decoding.

**Steen-Baker, A.A., Ng, S., Payne, B.R., Anderson, C.J., Federmeier, K.D., & Stine-Morrow, E.A.L. The effect of context on processing words during sentence reading among adults varying in age and literacy skill. *Psychology and Aging, 32,* 460-472.**

The eye movements and comprehension of a sample of 80 adults of different ages and reading ability were monitored while they read sentences in which the final word differed in contextual constraint and expectancy. For example, in the sentence “As soon as they reached the sand, he stopped to take off his \_\_\_”, the word *shoes* is strongly constrained and expected, while the word *watch*, although plausible, is unexpected. In the sentence “They had to shampoo the new rug after the accident with the \_\_\_”, the word *wine* is weakly constrained but expected, while the *table* is both weakly constrained and unexpected. Adults with word recognition scores below the 8th grade level read the sentences more slowly than adults with higher reading ability. But, the effect of context on eye movements did not differ as a function of reading skill. In addition, lower skill adults did not seem to be aided by context in their recognition of the target words. However, they did show slightly lower comprehension of the weakly constrained or unexpected sentences.

**Tighe, E.L., & Binder, K.S. (2015). An investigation of morphological awareness and processing in adults with low literacy. *Applied Psycholinguistics, 36,* 245-273.**

Morphological awareness was found to be an important contributor to reading comprehension as assessed with a cloze task. Of the 57 participants, 12 were from an ESOL Level 3 class, 13 were from a pre-GED class, and 32 were from a GED class. Inflectional endings (those that change the tense or pluralize a word but keep its word class intact – e.g., *kill* vs. *killed*) were found to be especially challenging for students with limited literacy skills.

**Tighe, E. & Schatschneider, C. (2016). Examining the relationships of component reading skills to reading comprehension in struggling adult readers: A meta-analysis. *Journal of Learning Disabilities, 49,* 395-409.**

Results from 16 studies of adults enrolled in ABE, adult secondary education, adult English second language courses and Job Corps were analyzed to determine the relative contributions of component reading skills to reading comprehension. Morphological awareness (i.e., ability to manipulate and combine word parts), language comprehension, fluency, oral vocabulary knowledge, real word decoding, and working memory were all found to be strong predictors of reading comprehension.

**To, N.L., Tighe, E.L., & Binder, K.S. (2016). Investigating morphological awareness and processing of transparent and opaque words in adults with low literacy skills and in skilled readers. *Journal of Research in Reading, 39,* 171-188.**

Adults were asked to listen to a word followed by a sentence with a missing word (e.g., “employ. It is difficult to find \_\_\_\_\_”) and provide the correct form of the missing word (i.e., “employment”). Participants were native and non-native English speakers enrolled at ABE centers (n=61) and in college (n=89) For both the adults with low literacy skills and skilled readers, performance on this task explained unique variance in word reading and reading comprehension. In addition, results indicated that adults with low literacy skills were more impaired than skilled readers on items containing phonological changes (e.g., confide vs. confidence) but not on items involving orthographic changes (e.g., rely vs. reliable).

**ABE Reading Instruction:**

**Bakhtiari, D., Greenberg, D., Patton-Terry, N., & Nightingale, E. (2015). Spoken oral language and adult struggling readers. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 4,* 9-20.**

Research on the oral language of adults who struggle with reading was reviewed. Areas of oral language discussed included: phonological awareness, morphological awareness, vocabulary, syntactic knowledge, listening comprehension, and dialect. Suggestions for instruction included: practice with phonemes; explicit instruction in breaking down morphologically complex words; intensive vocabulary instruction and oral practice with word meanings; practice with spoken messages and participation in discussions; sentence building activities; and practice in differentiating spoken language from print.

**Gray, S.H., Ehri, L.C., & Locke, J.L. (2018). Morpho-phonemic analysis boosts word reading for adult struggling readers. *Reading and Writing, 31,* 75-98.**

Low frequency morphologically complex academic words (e.g., inalienable) were taught to adults reading at about the 6th grade level in one of two ways: via morpho-phonemic analysis or whole word study. Each method consisted of the same number of steps, but with differing content:

|  |  |  |
| --- | --- | --- |
| **Step** | **Morpho-phonemic analysis** | **Whole word study** |
| 1 | Read aloud definition | Read aloud definition |
| 2 | Read aloud and write synonym | Read aloud 2 sentences containing word |
| 3 | Read aloud sentence containing word | Read aloud and write synonym |
| 4 | Read aloud and write word origin and meaning | Identify and write part of speech |
| 5 | Read aloud and write affixes and roots | Identify and write words associated with meaning |
| 6 | Identify suffix’s role (in determining part of speech) | Read/write the word |
| 7 | Read and write related words with the same root | Count the number of letters in word |
| 8 | Segment word into syllables | Spell/visualize/write word |
| 9 | Identify syllable with greatest stress | Describe what makes the word hard to spell |

Instruction was delivered individually over 4 weeks, in 2-hour sessions, with 10 words taught per week. Participants were a mix of monolingual African Americans and bilingual Spanish speakers. Both types of instruction resulted in large gains in the ability to read, spell, match definitions, and complete fill-in sentences with the taught words, with no differences between the groups. However, the morpho-phonemic analysis group made better gains on a root word recognition test than did the whole word study group. The morpho-phonemic group also made significantly better gains on the WJIII letter-word ID and word attack subtests than the whole word group did. No gains in vocabulary, comprehension, and spelling standardized test scores occurred for either group.

**McHardy, J., Wildy, H., & Chapman, E. (2018). How less-skilled adult readers experience word-reading. *Australian Journal of Language and Literacy, 41,* 21-29.**

A group of 36 adults with difficulties in decoding were asked about what they were thinking and the strategies they used when they were asked to read words. Four groups were identified: (1) locked out readers, those who are unable to make sense of the task and what others tell about how to read a word; (2) anxious readers, those who lack confidence in what they know and prefer to avoid unknown words; (3) wandering readers, those who have confidence but who make errors by guessing; and (4) persistent readers, those who keep at it, despite progress that can be slow and stressful. The authors’ recommendations include: “To build reading skill where reading difficulties persist, instruction must be informed by diagnostic assessment…Effective instruction requires identification of what each learner knows and what skills are yet to be mastered…Without careful assessment to provide information about aspects of learner difficulties, teaching may not be useful…” (pg. 27).

**Pergams, O.R., Jake-Matthews, C.E., & Mohanty, L.M. (2018). A combined read-aloud think-aloud strategy improves student learning experiences in college-level biology courses. *Journal of College Science Teaching, 47,* 10-15.**

In three classes of community college biology courses (ns = 8, 12, and 14), students and their instructor took turns reading paragraphs aloud from their textbook. Following each paragraph, the class stopped to paraphrase, summarize, and analyze what was read. At the end of the semester, students took a survey asking them to rate their level of agreement with the following statements:

(1) It made me read the text more than I would have otherwise.

(2) It made me understand the text more than I would have otherwise.

(3) The instructor elaborating on the text was useful to me.

(4) In general, I learned how to read difficult texts with greater comprehension.

(5) I prefer a class conducted this way over a class with lecture and PowerPoints.

Pooling across the 3 classes showed positive agreement by the students to all of the statements. The strongest approval was in response to #3 above; the lowest was to #5. The authors also note that attempts to implement the strategy in larger classes were not successful due to loss of student attention.

**Reder, S. (2014). *The impact of ABS program participation on long-term literacy growth.* Washington, DC: US Department of Education. Retrieved from** [**http://lincs.ed.gov/employer/2\_ABS\_Literacy\_Growth.pdf**](http://lincs.ed.gov/employer/2_ABS_Literacy_Growth.pdf)

Adults in Portland (OR) aged 18-44 years who had participated in adult basic skills (ABS) programs for at least 100 hours were found to have higher levels of future literacy proficiency than those with minimal participation. GED attainment was found to have a more short-lived impact on proficiency. More research involving a larger data set allowing comparable ABS program participants and nonparticipants to be followed was called for.

**Robinson, S.A. (2018). A study designed to increase the literacy skills of incarcerated adults. *The Journal of Correctional Education, 69,* 60-72.**

Results from a phonics curriculum (*Pure and Complete Phonics)* taught in 5 correctional facilities (3 male and 2 female) in a midwestern state were compared to results from the existing curricula. Students scoring at or below the 5th grade level on the Test of Adult Basic Education were invited to participate. The 41 volunteers were randomly assigned to either the treatment (i.e., phonics) or control (i.e., existing curriculum) group. The same teachers delivered both curricula for 15 weeks of instruction, 5 hours per week. The phonics curriculum was taught 1 hour a day, Monday-Friday. The content and delivery schedule for the existing curricula were not specified, beyond saying that they were “ill-defined and perhaps ineffective” (pg. 68). Subtests from the Woodcock-Johnson Tests of Achievement III were used for pre- and post-testing (Letter-Word Identification, Word Attack, Reading Fluency, Spelling, and Spelling of Sounds). Gains for the group receiving the phonics curriculum were significantly better than for the control on the Letter-Word Identification, Word Attack, and Reading Fluency subtests.

**Rodrigo, V., Greenberg, D., & Segal, D. (2014). Changes in reading habits by low literate adults through extensive reading. *Reading in a Foreign Language, 26,* 73-91.**

Two approaches to reading instruction were compared to see how they affected the reading habits of 181 adults reading at the 3rd-6th grade levels. About half of the students were non-native English speakers. One approach – a scripted program – taught skills explicitly, with no instructional time set aside for reading practice and/or pleasure reading. In the other approach, at least 25% of each class session included opportunities for students to read for pleasure. Students receiving both approaches reported a positive attitude toward reading and enjoyment in doing it. However, students given the instructional opportunity to read for pleasure reported reading more books and reading more often than the students for whom class time was not set aside for this purpose. They also reported visiting bookstores and libraries more often. Native English speakers reported reading and finishing more books than non-native speakers. Students in the pleasure reading group did not make better gains in reading achievement than the students in the scripted program.

**Scarborough, H.S., Sabatini, J.P., Shore, J., Cutting, L.E., Pugh, K., & Katz, L. (2013). Meaningful reading gains by adult literacy learners. *Reading and Writing, 26,* 593-613.**

The gains made by beginning level adult literacy learners receiving an average of 15 weeks of one-to-one tutoring were analyzed. Nearly half of the participants made significant gains in their reading ability (defined as making a half year or more of improvement in reading grade level). Gains were not related to the kind of tutoring received or to differences in age, gender, years of schooling, oral language, verbal memory, or rapid naming speed. However, gainers were less likely to have reported a history of learning disability or special assistance in reading, and had higher scores on the pre-intervention assessments of phonological awareness and reading.

**Schneider, M. (2015). Los Angeles Unified School District implements evidence-based reading instruction. *CalProgress, 15,* 1, 14. Retrieved from** [**http://www.calpro-online.org/documents/CALPRO\_2015\_Newsletter\_XV\_508.pdf**](http://www.calpro-online.org/documents/CALPRO_2015_Newsletter_XV_508.pdf)

Results from five years of implementing evidence-based reading instruction (EBRI) in LAUSD’s Division of Adult and Career Education classes were described. Prior to a focus on EBRI, instruction was conducted in reading labs where students worked individually answering comprehension and vocabulary questions. Changes with EBRI included: conducting diagnostic assessment in four components of reading; use of individual and class assessment profiles to create long-term lesson plans with objectives; use of cooperative learning strategies; instruction in academic vocabulary and comprehension strategies; and strategies for classroom management. Outcomes have included improved program completion and CASAS gains.

**Shore, J.R., Sabatini, J.P., Lentini, J., & Holtzman, S. (2013). Changes in reading practices and perceptions in low-literacy-level adult learners. *Reading Psychology, 34,* 550-568.**

Adults reading below the 7th grade level (as determined by the WRAT) who were enrolled in 3 different 1:1 tutoring programs (Guided Repeated Reading, Corrective Reading, and RAVE-O) were interviewed to determine their perceptions of how the tutoring affected their reading. Those enrolled in the Guided Repeated Reading tutorial reported reading more books, magazines, and newspapers after program completion. They also said that felt that they had improved in their prose reading ability. Those enrolled in the Corrective Reading tutorial reported no differences in how often or how well they read prose materials. They did report improved ability to read functional texts (e.g., street signs, labels, menus, etc.). Learners enrolled in the RAVE-O tutorial felt they had improved in their prose reading ability. However, this group reported no change in how often they read. Learners in all 3 groups showed significant improvement in their reading ability (as determined by the W-J III). No differences in gains were found among the 3 kinds of tutoring.

**Shore, J., Sabatini, J., Lentini, J., Holtzman, S., & McNeil, A. (2015). Development of an evidence-based reading fluency program for adult literacy learners. *Reading Psychology, 36, 86-104.***

Fifty adults with word recognition skills at the 7th grade level and below received one-to-one tutoring as a supplement to their regular ABE instruction. A guided repeated reading technique was used, where the tutor and learner read aloud from high interest passages on which the learner was mostly accurate (85%-97%), but lacked speed and prosody. Also, as needed in order to understand what was being read, tutors provided instruction in word analysis, vocabulary, and comprehension. After 30 hours of instruction, gains were found in decoding, fluency, and comprehension. However, students in the guided repeated reading group did not make better gains in reading achievement than the students receiving two other variants of one-to-one tutoring.

**Tighe, E.L., Barnes, A.A., Connor, C.M., & Steadman, S.C. (2013). Defining success in adult basic education settings: Multiple stakeholders, multiple perspectives. *Reading Research Quarterly, 48,* 415-435.**

Effectiveness in promoting adult students’ literacy achievement in two counties in Florida was looked at quantitatively (via initial TABE scores and Literacy Completion Points, which programs earn when students move from one functioning level to another) and qualitatively (via classroom observations and teacher and student interviews). The quantitative part of the study involved more than 10,000 participants, attending ABE, GED, and ESOL classes. The qualitative part of the study involved 11 classrooms, selected to provide a contrast in effectiveness based on the results of the quantitative part of the study.

Semi-structured interview questions for teachers included:

* What instructional practices do you use, and which are most and least effective?
* What are the most common reasons that students successfully complete their ABE coursework?
* What are the most common reasons that students fail to complete their ABE course work?

Semi-structured student interview questions included:

* Why are you attending ABE classes?
* How will you know when you have reached your educational goals?
* What is challenging about attending ABE classes?
* What will you do when you finish your ABE courses?

More effective classrooms were characterized by:

* A range of instructional opportunities conducted in whole group, small group, one-on-one with a teacher or peer, and independently
* Use of a multitude of diverse materials
* Teachers who were described as encouraging, supportive, approachable, accessible, and knowledgeable
* Students who had clearly articulated goals of where they were going and what they wanted to achieve, along with positive attitudes about their ability to succeed

**Trawick, A.R. (2017). *Using the PIACC Literacy Framework to guide instruction: An introduction for adult educators.* Retrieved March 8. 2018, from** [**https://lincs.ed.gov/professional-development/resource-collections/profile-1025**](https://lincs.ed.gov/professional-development/resource-collections/profile-1025)**. Washington, DC: American Institutes for Research.**

PIACC, the Programme for the International Assessment of Adult Competencies is a cyclical, international assessment of the skill levels of adults. In this guide, the key elements of the framework PIACC uses to assess literacy, based on contexts (e.g., work, personal, societal, educational), contents (e.g., prose, document, digital) and strategies required (e.g., access and identify; integrate and interpret) are discussed in terms of their relevance for adult literacy instruction. Factors affecting text difficulty are also described.

**Other Factors Affecting ABE Instruction:**

**Belzer, A., & Kim, J. (2018). We are what we do: Adult Basic Education should be about more than employability. *Journal of Adolescent & Adult Literacy, 61,* 603-608.**

The authors of this commentary argue that (1) current federal policy has narrowed the emphasis in Adult Basic Education (ABE) to workforce development, and (2) this current emphasis has resulted in undercutting other important social outcomes that increased skills can bring. To support their first point, the authors contrast the definition of literacy presented in the National Literacy Act of 1991 (“an individual’s ability to read, write, and speak in English, and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and develop one’s knowledge and potential”) with the requirement in the most recent statute funding Adult Basic Education – the Workforce Innovation and Opportunity Act – of outcome measures focusing on postsecondary education, training, employment, and earnings. To support their second point, the authors describe findings from the Programme for International Assessment of Adult Competencies that show that “gains in literacy skills, perhaps too small to make an observable difference in employment and earnings outcomes, can have meaningful individual and social benefits that promote health and more engaged citizenship” (pg. 606). The authors also suggest that narrowing the focus to employability in ABE may not yield the desired results because of barriers faced by learners in accruing the number of hours of instruction required to increase skills and the absence of a straightforward causal relation between improved skills and better earnings.

**Greenberg, D., Wise, J.C., Frijters, J.C., Morris, R., Fredrick, L.D., Rodrigo, V., & Hall, R. (2013). Persisters and nonpersisters: Identifying the characteristics of who stays and who leaves from adult literacy interventions. *Reading and Writing, 26,* 495-514.**

Low intermediate level literacy learners with different rates of program participation were compared. Program completers (defined as those attending at least 60 hours of the 100 hours of instruction offered) were more likely than those who dropped out before the midpoint to be older, female, English as second language learners, have lower reading fluency, comprehension, and rapid letter naming scores, and report receiving more information from magazines, the internet, television, radio, and from family and friends.

**Kirkland, D.E. (2019). The truth behind the pipeline: Is the illiteracy-to-prison connection real? *Literacy Today, 36,* 10-11.**

This commentary examines the connection between illiteracy and incarceration, arguing that, rather than one causing the other, both share a common root cause: the social, political and historical forces that shape and maintain them both. The author also suggests that research showing that literacy instruction is related to lower recidivism rates stems from work in the prison literacy movement “with vulnerable and targeted populations who experience high degrees of trauma and other social injuries that complicate teaching and learning” (pg. 11).

**Mellard, D.F., Krieshok, T., Fall, E., & Woods, K. (2013). Dispositional factors affecting motivation during learning in adult basic and secondary education programs. *Reading and Writing: An Interdisciplinary Journal, 26,* 515-538.**

Characteristics of ABE/ASE learners at all 6 levels who made a gain to the next level or higher were compared to those who did not. Learners who achieved gains differed from those who did not in: better attendance; perception of fewer limitations on job opportunities; more satisfaction with their lives; and non-Hispanic group membership. Percentage gains for each level were: 58% (1), 65% (2), 75% (3), 73% (4), 74% (5) and 85% (6).

**Mellard, D.F., Woods, K.L., & Lee, J.H. (2016). Literacy profiles of at-risk young adults enrolled in career and technical education. *Journal of Research in Reading, 39,* 88-108.**

Within a sample of learners enrolled in a job training program, students reading around the 8th grade level were compared with those reading below. Differences were found in the groups’ word reading ability and processing speed, but not their language comprehension and cognitive processing/working memory abilities. Self-reports of learning disabilities were also higher in the lower literacy group (28% vs. 14%). The authors conclude:

The lower literacy group will likely need more intensive instructional efforts (e.g., smaller instructional groups, targeted or focused instruction on specific reading components and instructors with more specific knowledge of reading instruction) and increased learning opportunities (e.g., additional practice on more occasions) for them to progress… (pg. 17-18).

**Miller, C.D., Greenberg, D., Hendrick, R.C., & Nanda, A. (2017). Educational attainment: Limited implications for adult literacy learners. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 6,* 21-36.**

A group of native English speaking adult literacy learners who had graduated from high school was compared with a similar group who had dropped out prior to attending high school. Both groups were reading words at the 3rd-5th grade level, and the majority of participants in both groups were female and African American. High school completers were found to be more likely to be currently employed, registered to vote, and to use and get information from the internet. Non-completers scored significantly better on a reading fluency test. No differences between the groups were found on tests of vocabulary, reading aloud non-words, reading comprehension, spelling, reading pleasure, self-perception of reading ability, and print reading practices. The findings call into question the validity of using of level of educational attainment alone as an indicator of literacy behaviors, beliefs, and outcomes.

**Muth, B., Sturtevant, E., & Pannozzo, G. (2017). Performance and beliefs: Two assessments of literacy learners in prison, Part II. *The Journal of Correctional Education, 68(2),* 62-81.**

Six participants were recruited for individual, open-ended interviews about their beliefs about learning and literacy. Two of the participants were reading at the beginning level, three at the intermediate, and one at the advanced. Five were male, three African American, three Caucasian. One was a non-native speaker of English. One theme emerging from the interviews concerned the prisoners’ beliefs about their inner resources for learning, such as perseverance, self-control, maturity, and independence. Support of other prisoners was also noted as a possible resource. Beliefs about barriers to learning included embarrassment and unsafe classrooms. The interviews also revealed how personal literacy practices (like letter writing) can be devalued by a prisoner because they are not part of their literacy program. From these results the authors argue “If prison teachers only view learners as quantified profiles of academic needs and strengths, the risk of alienation is great…Bifurcated methods such as those used here can serve as checks against elitist instruction (overly focused on the norms) and feel-good, self-indulgent instruction (overly focused on the personal).” (pg. 78).

**Reynolds, S., & Johnson, J. (2014). Pillars of support: A functional asset-based framework for ABE learners. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 3,* 36-49.**

Sixty ABE students identified as exemplary (based on their achievement, attendance, or community service) were interviewed to identify (a) why the students entered a program; (b) why they persisted; and (c) what influenced their transition to opportunities beyond the program. Decisions to enter a program were found to depend on: an individual’s belief that success was possible; family encouragement; program marketing; and mentors in the community. Persistence was related to: an individual’s flexibility and resourcefulness in overcoming barriers to participation; strong goal orientation and a desire to achieve; family support and motivation; and seeing progress on a regular basis and feeling a sense of belonging and community in the program. Transitioning to opportunities outside the classroom were connected to: the increased sense of hope and optimism that success in the program brought the individual; family encouragement and support in setting higher goals; confidence gained by supportive relationships with program staff; and opportunities afforded by their communities to be contributing members. Variations among individuals were found in the relative importance of each of the factors, as well as within individuals at different points in their process.

**Shaw, D., Tham, Y.S.S., Hogle, J., & Koch, J. (2015) Desire: A key factor for successful online GED adult learners. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education, 4,* 21-35.**

The roles of personal and program factors in persistence in an online GED program were investigated. Twelve students (5 graduates, 5 enrolled currently, and 2 who had dropped out) were asked about their experiences. The two students who dropped out cited work demands, work schedules, and communication issues with the teacher as factors in their decisions. Those who completed or were on track for completion cited satisfaction with their curriculum, their connection with their teachers, and their ability to organize and discipline their study. According to the investigators, however, the most widely expressed factor for successful completion was desire: “making up one’s mind and pushing through doubts and challenges” (pg.29).

**Sligo, F., Tilley, E., Murray, N., & Comrie, M. (2015). Young adult literacy learners describe the text-orality nexus. *Text & Talk, 35,* 010-121.**

Eight-eight participants in adult literacy training programs in New Zealand were asked about their educational and employment needs. The majority of interviewees were less than 30 years of age, and about 75% identified themselves as students/trainees or unemployed. The following five themes were identified by at least 25% of the sample:

* Communication – being able to orally participate with other people more effectively
* Computer skills – improved capability in using computers
* Reading and/or writing – being able to get something done and as a basis for other activities
* Life skills – as needed for survival, health, independent living
* Confidence and related attributes – being able to achieve one’s goals and to be successful in the workplace

The authors suggest that their results indicate participants’ awareness of how literacy should connect with other life activities. “Paradoxically, too great a concern for acquisition of textual competencies at the expense of broader capabilities may undermine the main contribution of text literacy” (pg. 117).

**U.S. Department of Education, Office of Career, Technical, and Adult Education. (2015, February). *Making skills everyone’s business: A call to transform adult learning in the United States.* Washington, DC: Author. Retrieved March 9, 2015 from** [**http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/making-skills.pdf**](http://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/making-skills.pdf)

The Organisation for Economic Co-operation and Development’s (OECD) Survey of Adult Skills assessed the cognitive and workplace skills needed for success in the 21st-century global economy. The survey was conducted with nationally representative samples of adults, ages 16 through 65, from 24 countries. This report takes a deeper look at the U.S. data and outlines seven strategies for engaging public and private organizations in raising Americans skills, which include:

* Creating joint ownership of solutions.
* Expanding opportunities for adults to improve foundational skills.
* Making career pathways available and accessible in every community.
* Ensuring all students have access to highly effective teachers, leaders, and programs.
* Aligning federal policies and programs to integrate services for adults.
* Increasing the return on investment in skills training for business, industry, and labor.
* Committing to closing the equity gap for vulnerable sub-populations.

**K-12 Readers and Reading Instruction:**

**Boulay, B., Goodson, B., Frye, M., Blocklin, M., & Price, C. (2015). *Summary of research generated by Striving Readers on the effectiveness of interventions for struggling adolescent readers.* Washington, DC: National Center for Educational Evaluation and Regional Assistance, Institute of Educational Sciences, US Department of Education. Retrieved from** [**http://ies.ed.gov/ncee/pubs/20164001/pdf/20164001.pdf**](http://ies.ed.gov/ncee/pubs/20164001/pdf/20164001.pdf)

This report summarized the results of 17 studies of 10 different interventions designed to improve the reading achievement of 6th-11th graders. Four of the interventions had at least one study showing a positive effect: *Read 180; Xtreme Reading; Learning Strategies Curriculum;* and *Voyager Passport Reading Journeys.* The following interventions showed no discernible effects: *Rewards; Fusion Reading Program; Read to Achieve; Kentucky Cognitive Literacy Model; Chicago Striving Readers;* and *Strategies for Literacy Independence across the Curriculum.*

**Connor, C.M., & McCardle, P. (Eds.) (2015). *Advances in reading intervention: Research to practice to research.* Baltimore: Brooks.**

This volume summarizes presentations and discussions from The Dyslexia Foundation’s 14th Extraordinary Brain Symposium. The 21 chapters focus largely on what is and isn’t known about effective interventions for children with language difficulties and differences. Better understanding of the impact of motivation, self-regulation, and executive functioning on an intervention’s success is called for by a number of authors. As Maureen Lovett (Center for the Study of Adult Literacy) notes in her overview of reading intervention research: “Implementation and psychosocial factors play a critical role in intervention outcomes; among the most important are motivation and the individual’s perception of his or her self-efficacy as a learner – effects that are likely reciprocal…Neglecting instructional group dynamics, teacher-student and student-student affiliation, and the ways in which group factors can mobilize change for struggling learners limits our understanding of the contexts that facilitate the best outcomes for learners” (pg. 15).

**Fisher, D., & Lapp, D. (2013). Learning to talk like the test: Guiding speakers of African American Vernacular English. *Journal of Adolescent & Adult Literacy, 56,* 634-648.**

Instructional principles and activities are described that led to an increase in rate of passing a high stakes assessment test for African American high school students from 0% in 2008 to 97% in 2011. Activities included code-switching tasks involving video and text, academic language frames, and dialogue analyses. Instructional principles (verbatim from pg. 646 of the article) identified were:

* Academic language learning is enhanced when students understand why the register of school is one they may need for some life interactions.
* Academic language learning develops naturally when the home registers of students are valued and respected.
* Academic language is acquired as students engage in language-based social and academic interactions occurring in situations that authenticate the need for and their use of multiple registers.
* Language expansion becomes a reality of importance to students when their teachers provide scaffolded language and conceptual experiences based on their developing ideas and questions.

**Hutchison, A.C., & Colwell, j. (2014). The potential of digital technologies to support literacy instruction relevant to the Common Core State Standards. *Journal of Adolescent & Adult Literacy, 58,* 147-156.**

Studies conducted on the ways that digital tools have been used to address the Common Core literacy standards were reviewed. Participants in the studies were 6th-12th graders. Among the 10 studies reviewed, four themes were identified: (1) reading and writing multimodal texts; (2) collaboration; (3) collecting resources; and (4) sharing information and soliciting feedback. Digital tools associated with reading anchors included: PowerPoint, Diigo, Voicethread, and online threaded discussions.

**Kuhn, M.R., & Schwanenflugel, P.J. (2018). Prosody, pacing, and situational fluency (or why fluency matters for older readers. *Journal of Adolescent & Adult Literacy, 62,* 363-368.**

In this commentary the authors argue that too often we think of fluency too narrowly, with negative consequences for students. They define fluency as:

“Fluency combines accuracy, automaticity, and oral reading prosody, which taken together, facilitate the reader’s construction of meaning. It is demonstrated during oral reading through ease of word recognition, appropriate pacing, phrasing, and intonation. It is a factor in both oral and silent reading that can limit or support comprehension” (pg. 364).

In addition, the authors conclude:

* Improvements in oral reading fluency lead to improvements when reading silently.
* Fluency is affected by what one is reading. Narrative texts tend to be read with more fluency than informational texts.
* To improve fluency, students need to read texts across a broad range of subjects.
* The best way to improve fluency is to provide students with extensive opportunities to practice.

The authors conclude their commentary by recommending 4 strategies that they see as connected to their definition of fluency:

* Listen-read-discuss, where the critical terms and ideas in a text are pre-taught, students read independently, followed by a discussion of what was read
* Text sets, where students read a series of texts of increasing difficulty on the same topic
* Scaffolded silent reading, where students select texts from various genres and teachers explain, model, help students to apply, and monitor reading for meaning
* Partner reading, where students take turns reading aloud and following along as their partner reads

**Lupo, S.M., Strong, J.Z., Lewis, W., Walpole, S., & McKenna, M.C. (2018). Building background knowledge through reading: Rethinking text sets. *Journal of Adolescent & Adult Literacy, 61,* 433-444.**

A framework for using text sets that meets disciplinary goals, builds background knowledge, and increases volume of reading is presented. The framework uses 4 texts: “one that is a challenging on- or above-grade-level text (the target text) and three other texts that build the background knowledge and motivation needed to comprehend the target text” (pg. 436). Supporting texts include (1) a visual or video text to activate background knowledge, (2) an informational text that builds additional knowledge, and (3) an “accessible text” that garners buy-in. The article provides several examples of “quad text sets” in different content areas, along with recommendations for ordering the texts and relevant comprehension strategies.

**Park, J.Y. (2013) Becoming academically literate. *Journal of Adolescent & Adult Literacy, 57,* 298-306.**

Interviews, observations, and student work samples were analyzed in a case study of the ways a 17-year-old immigrant youth interacted with academic texts and discourses. The challenges the student encountered while working to become academically literate, along with the strategies and mindsets she brought to school tasks, are described. School and its academic expectations were often discussed by the student through comparisons of the ways of learning valued by the school system of Guinea to those valued in the United States. In describing her reading difficulties, the student pointed to the “big words” and unfamiliar topics.

**Spear-Swerling, L. (2015) *The power of RTI and reading profiles: A blueprint for solving reading problems.* Baltimore: Brooks.**

Major goals of RTI (response to intervention) – a K-12 initiative – are to provide high quality instruction matched to students’ needs and to monitor outcomes in order to make decisions about changes in instruction or goals. This book summarizes the research supporting the validity and value of reading profiles (i.e., patterns of readers’ strengths and needs) and makes the case that reading profiles are the foundation for effective RTI.

**Wang, Z., Sabatini, J., O’Reilly, T., & Weeks, J. (2019). Decoding and reading comprehension: A test of the decoding threshold hypothesis. *Journal of Educational Psychology, 111,* 387-401.**

According to the “decoding threshold hypothesis”, the relationship between decoding and reading comprehension is unpredictable if decoding falls below a certain level of proficiency. This article reports on 2 studies of 5th-10th graders that support the decoding threshold hypothesis. Students who scored below a certain level of achievement in decoding (e.g., the 38th percentile in Grade 5) did not make the same progress in reading comprehension over a 3-year period as their peers did. The authors suggest that, to be effective in improving comprehension, decoding instruction must push students above a certain level of proficiency.

**What Works Clearinghouse (WWC) (2016). WWC intervention report: *READ 180*©. Available from** [**http://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc\_read 180\_112916.pdf**](http://ies.ed.gov/ncee/wwc/Docs/InterventionReports/wwc_read%20180_112916.pdf)

WWC reviewed 9 studies assessing the effectiveness of *READ 180*©, a program for students in grades 4-12 who are reading 2 or more years below grade level. *READ 180*© is designed to run 90 minutes a day and consists of 3 parts: whole group direct instruction, small group rotations, and whole group wrap-up. WWC concluded that *READ 180*© has positive effects on comprehension, potentially positive effects on reading fluency, and no discernible effects on alphabetics. Initial start-up costs of *READ 180*© for 60 students is $43,000, which includes 2.5 days of professional development.

**Professional Development:**

**Darling-Hammond, L., Hyler, M.E., & Garner, M. (2017). *Effective teacher professional development.* Retrieved March 8, 2018, from** [**https://learningpolicyinstitute.org/product/teacher-prof-dev**](https://learningpolicyinstitute.org/product/teacher-prof-dev)**. Palo Alto, CA: Learning Policy Institute.**

The results of 35 studies examining connections among professional development, teaching practices, and student outcomes were reviewed. Seven features of effective professional development were identified:

* Focusing on a specific curriculum content (e.g., literacy, math, science)
* Providing opportunities to design and try out what is being recommended
* Supporting collaboration among participants
* Providing models and modeling of effective practice (e.g., videos, lesson plans)
* Providing coaching and expert support
* Providing opportunities to reflect and ask for feedback
* Including adequate time to learn, practice, and reflect

Also discussed in the report are barriers that can cause even the best-designed professional development to fail to produce the desired outcomes, such as:

* Inadequate resources, including necessary curriculum materials
* Lack of a shared vision
* Lack of time for implementation
* Failure to align state and local policies
* Dysfunctional school cultures
* Inability to track and assess the quality of PD

**Hardin, B.L., & Koppenhaver, D. (2016). Flipped professional development: An innovation in response to teacher insights. *Journal of Adolescent & Adult Literacy, 60,* 45-54.**

In flipped professional development (PD), practitioners watch and listen to training materials when and where they choose, following which they apply their learning while being guided by trainers. Flipped PD reduces the need for face-to-face sessions and enables such sessions to focus on technical assistance and problem-solving. In this article, experiences from a project involving 36 K-12 teachers enrolled in flipped PD that focused on reading instruction are reported. The authors conclude:

We have no data with which to argue that the flipped PD model offers superior learning opportunities to more traditional methods of PD; we studied neither the learning outcomes of participants nor their students in the initial trial. It is significant, however, that teachers judged the flipped PD model to be an effective approach. This judgment increases the likelihood that teachers will continue to engage in future PD opportunities and recommend the experiences to colleagues. The flipped approach offers a cost-effective model that supports the inclusion of many elements of best practice identified by research (pg. 53).

**Jensen, B., Sonnemann, J., Roberts-Hull, K., & Hunter, A. (2016). *Beyond PD: Teacher professional learning in high-performing systems.* Washington, DC: National Center on Education and the Economy. Retrieved from** [**http://www.ncee.org/BeyondPD/**](http://www.ncee.org/BeyondPD/)

Professional learning practices in 4 high performing educational systems (Singapore, Hong Kong, Shanghai, and British Columbia) were analyzed. Among the key findings: High-performing systems (as indicated by student performance on the Program for International Assessment aka PISA):

* Assess students’ learning to identify their next stage of learning
* Develop instruction that provides for the next stage of student learning
* Evaluate the impact of instruction on student learning so that teachers can refine instruction.

Among the key conclusions: Effective professional development involves teachers collecting, evaluating, and acting on feedback to improve their teaching practices.

**Powell, C.G., & Bodur, Y. (2019). Teachers’ perceptions of an online professional development experience: Implications for a design and implementation framework. *Teaching and Teacher Education, 77,* 19-30.**

Responses of 6 high school social science teachers to an online teacher professional development (OTPD) experience were analyzed. The OTPD consisted of 10 video-based modules focused on differentiated instruction, each approximately 25-30 minutes in duration, and requiring 3 open-ended reflections per module. Following completion of the online work, the teachers were interviewed individually and face-to-face. Six themes emerged from the comments made in the teachers’ evaluation of the OTPD experience:

* Relevance: as characterized by whether it validated their current practice and addressed their professional needs, experience, and content knowledge
* Authenticity: as characterized by whether it reflected their student demographics and classroom reality
* Usefulness: as characterized by whether it provided instructional ideas and reminded or taught them about effective instructional practices
* Interaction and collaboration: as characterized by whether it provided opportunities to process, discuss, and obtain feedback
* Reflection: as characterized by whether it led to opportunities to consider and connect to their own practice
* Context: as characterized by whether it was convenient, flexible, and connected to system expectations

**Vanek, J., Simpson, D., Johnston, J., & Petty, L.I. (2018). *IDEAL distance education and blended learning handbook.* Retrieved April 8, 2019, from** [**https://edtech.worlded.org/wp-content/uploads/2018/08/IDEAL-Handbook-6th-Edition-8-16-18.pdf**](https://edtech.worlded.org/wp-content/uploads/2018/08/IDEAL-Handbook-6th-Edition-8-16-18.pdf)

Designed as a guide for Adult Basic Education programs developing and delivering distance education, this handbook’s content and resources also have relevance for a flipped classroom approach to professional development to teachers and administrators. The chapters covering “Setting Up Learners for Success” and “Getting Started” outline a number of best practices.