

What State and Local Leaders Need to Know about Improving Literacy Skills for Out of School Youth

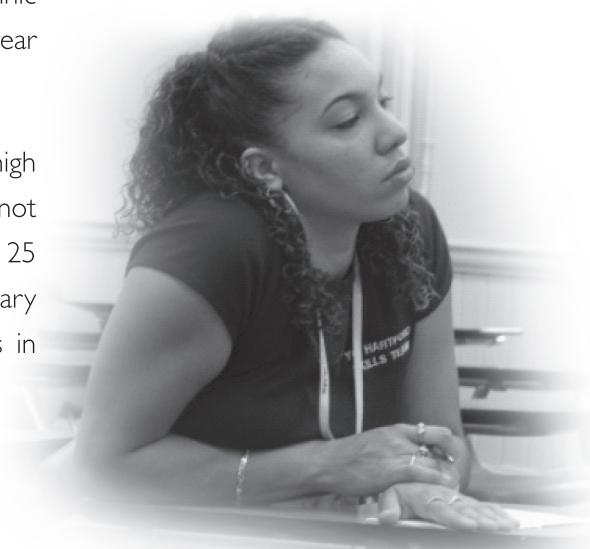
**National Center on Education and the Economy
Workforce Development Strategies Group**

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We Really Do Have a Literacy Problem in America

An alarming number of youth in the United States lack the basic literacy skills they need to succeed in good jobs and in their adult responsibilities. Almost 30 percent of our young people leave high school without a diploma. About half of the students who leave school early eventually get a credential, most often a GED, but millions are left with no credential at all. There are currently between 2 and 3 million 16-24 year olds not enrolled in school and with no credential. While literacy skill deficiencies are concentrated among high school dropouts, the crisis goes beyond students who drop out of school. Nearly half of all 17-year-olds cannot read, write and compute at a 9th grade level. On international comparisons of reading achievement, high school age students in the United States place close to the bottom, behind students from Philippines, Indonesia, Brazil and other developing nations. There is also an achievement gap in literacy among different racial, ethnic and socioeconomic groups that widens with each year in school.

Even among students who are able to obtain a high school diploma or a GED credential, many are not qualified for post-secondary education. More than 25 percent of young adults who enter post-secondary education are required to take remediation classes in reading, writing or mathematics. (NCES, 2003)





States and Cities Need to Take This Issue Seriously

This lack of literacy skills is a critical issue for our states and cities, as literacy skills are key for youth to become productive members of society and of the workforce. Post-secondary education, a proxy for good skills, is increasingly the threshold for a good job.

The lifetime earning differential between those with no college and those with at least some college has been accelerating for the past twenty years. Workers with a college education (bachelor's degree) earn 72 percent more than workers with no degree. An associate's degree provides workers with a wage boost of about 20-30 percent over a high school diploma. Those with some college, but no degree, earn 14 percent more than those with no college. Workers with no high school diploma are the only group of workers whose wages have declined over the past twenty years.

Defining Literacy

When we think of literacy, we think of reading. But being able to read does not mean someone is necessarily a literate person. In the 21st century, literacy encompasses the skills adults need to be functional in society, including numeracy and writing skills. Many experts also define literacy to include the "soft-skills" like basic communications skills, technology skills and problem-solving skills.

The Workforce Investment Act defines literacy as “an individual’s ability to read, write, and speak in English, compute, and solve problems, at levels of proficiency necessary to function on the job, in the family of the individual and in society.”

What the Research Tells Us

In general, young adults who are behind in reading and writing have simply not had as much experience reading and writing as young adults who are proficient readers and writers. Young adults who are behind have also not learned the strategies that proficient readers and writers use to understand text and to communicate their ideas in writing. This means that explicitly teaching the strategies that proficient readers and writers use and providing sufficient and guided practice are the keys to improving these skills. In mathematics, many young adults never understood the basic mathematical concepts underlying the procedures and formulas they were taught in elementary and middle school. Without this conceptual foundation, they are neither able to apply math to real life nor comprehend more advanced mathematic concepts of algebra, geometry, and probability.

Once students reach their upper teenage years without mastering basic reading, writing and mathematics skills, their confidence erodes. The need to address self-confidence and motivation is a critical factor with older youth. Other issues include identifying undiagnosed learning disabilities in older youth and literacy skills of English language learners.

Here is a summary of what the research tells us about supporting the reading, writing and mathematics skills of young adults:



Reading ~

Good readers can:

- decode words (figure out words from the alphabet);
- read fluently; and
- comprehend what they are reading.

Young adults who struggle with reading fall into two groups:

- those who still have decoding problems; and
- those who can decode, but lack comprehension skills.

Research suggests that:

- The biggest difference between proficient and less proficient readers is the amount of reading they do and the size of their vocabulary.
- Vocabulary is a key indicator of reading ability because it directly impacts comprehension and it reflects the amount of reading one has done. Students learn vocabulary best when it is in context. Looking up definitions for words or memorizing lists of definitions are not particularly effective strategies for low-achieving students.
- Motivation is key.
- Giving students strategies to use when reading can improve literacy ability and increase motivation.

Reading instruction should focus on:

- Young adults who still struggle with decoding need systematic, explicit and direct instruction on sound-spelling relationships and words (phonics and phonemic awareness). They should be given opportunities to identify words in context. They should also be given instruction on comprehension strategies and introduced to the practices of literate adults (how to choose a book, read-aloud, think-aloud modeling, etc).
- Young adults who need to increase their fluency can be helped with repeated reading and guided practice.
- Most young adults who struggle with reading primarily need help with comprehension skills. In general, we can increase comprehension by increasing the amount that students read and explicitly teaching the strategies proficient readers use to make sense of what they are reading.

Strategies for increasing comprehension include:

- Making sure readers know that they can stop when they do not understand the meaning of something they are reading and use one of a number of strategies to "fix" the problem: restating, going back to review, looking ahead for clues.

- Encouraging students to talk to other students about what they are reading. Students tend to learn better when they are engaged with their peers.
- Using graphic organizers to visually display text. These might include drawing text maps, note taking, or creating concept maps.
- Teaching students the basic components of fiction and non-fiction texts that they will encounter. These include: story setting, initiating events, internal reactions, goals, outcomes, illustrations, charts, graphs, heading and subheading. Not all students have “internalized” these components by the time they are adolescents.
- Instructing students how to find answers to their own questions in the text.
- Teaching students to create their own questions about a text.
- Teaching students to read a text and extract and summarize the most important aspects of it. This usually requires rereading a text and helps students learn how to focus on the important ideas.
- Teaching students several different strategies for better comprehending what they are reading often works better than teaching a single strategy.
- Teaching literacy is treated as a social activity. Classrooms are organized to foster collaboration and student interaction.
- Students learn through direct instruction by teachers, small group collaboration with their peers, and one on one conferences with their teachers.
- Teachers work with individuals and small groups to deliver targeted instruction based on students' needs.
- Reading is linked to writing. Students write about what they read.
- Teachers constantly monitor and assess student reading competence. Teachers use good diagnostics for determining student reading levels and specific reading difficulties.
- Teachers model literate behaviors and comprehension strategies explicitly for students.
- Students have regular and meaningful opportunities for practice.
- Students have access to ample high-interest reading material that is age, ability and culturally appropriate.

What happens in classrooms where low-performing readers learn to read better:

- Reading is taught as problem solving. Students learn how to approach unfamiliar texts and genres, how to solve difficult words, how to understand unfamiliar syntax.

Matching reading programs to young adults:

- In general, the lower a young adult's reading level, the more individualized instruction he or she will need. Young adults who are only a grade or two behind can benefit greatly from whole group instruction and small peer group work. Young adults who are much further behind will need more intensive instruction tailored to their particular reading difficulties, including any learning or physical disabilities.

- If young adults cannot decode words (roughly below a 5th grade reading level), they will need an individualized program that addresses their specific reading issues.
- If young adults are able to decode but having trouble with fluency and comprehension (roughly a 5th to 7th grade reading level), they will benefit from a program that combines whole group instruction, small peer group work and individualized instruction tailored to their particular reading difficulties.
- If young adults are struggling primarily with comprehension skills (roughly above a 7th grade reading level), programs can be primarily whole group instruction and small peer group work.

Writing ~

Good writers can:

- Communicate ideas clearly in written form
- Write in different genres and for different purposes and audiences
- Use correct writing conventions
- Move from an initial idea to a finished product using the writing process

Young adults who are struggling with writing fall into two categories:

- Those who cannot read well and are unfamiliar with writing forms, structures and conventions
- Those who have a basic understanding of writing conventions but lack the techniques to express their own ideas clearly in writing

Young adults who cannot write well:

- Do not write often
- Do not understand writing as a process and therefore do not revise initial drafts or use pre-writing strategies
- Use simplistic sentence structure
- Have a limited vocabulary
- Are not familiar with correct conventions of writing
- Are often not proficient readers

Research suggests that:

- Writing instruction that focused on the writing process, rather than just the final product, is more effective in teaching young adults to write well.
- Writing instruction using real contexts and audiences is more successful than instruction using artificial contexts.
- Students are motivated by writing about what they know.
- Writing should be integrated into all subjects and activities.

What happens in classrooms where young adults learn to write better:

- Students are explicitly taught the steps in the writing process (prewriting, drafting, revising, editing and publishing) and learn specific strategies for each step.
- Teachers model steps in the writing process.
- Students read frequently to become familiar with different types of writing and with writing conventions.

- Students write frequently and write in different genres.
- Students write about topics that have meaning for them and write in real contexts.
- Students receive specific feedback from teachers on their writing in order to make it better.
- Students share their writing with other students and provide feedback to each other.
- Assessment is ongoing and makes use of assessment tools which identify the characteristics of a good piece of writing.
- Grammar and writing conventions are taught in the context of student writing rather than a set of rules to memorize.

Mathematics ~

Proficient mathematics students can:

- Understand and apply important math concepts
- Compute with ease
- Formulate and solve problems
- Explain their mathematical reasoning
- Have confidence in their math skills and regard mathematics as a sensible and worthwhile subject

Young adults who struggle with mathematics fall into two categories:

- Those who cannot perform the basic arithmetic
- Those who can perform basic arithmetic, but cannot apply their knowledge to more complex mathematics situations

Young adults who cannot do math well:

- Do not have a conceptual understanding of the rules and formulas they were taught
- Have a hard time solving problems that are more than one step
- Often have very little confidence in their capacity to solve math problems
- Do not connect math concepts to each other or to real life contexts
- Do not understand that there are different ways to represent the same number
- Do not use estimation or “mental math” to solve problems or check their answers

Research suggests that:

- Instruction needs to balance teaching procedures and formulas with building conceptual understanding. Students need to have key ideas to connect to formulas.
- Instruction needs to focus on understanding numerical relationships, rather than on just finding the right answer.

- Practice needs to build on and extend understanding accompanied by feedback from teachers.
- Relating mathematics to real situations is key to helping students understand and value mathematics.
- Basic concepts of algebra, geometry and probability should be integrated into instruction of arithmetic so that connections between these content areas are better understood.

What happens in classrooms where young adults improve their mathematics skills:

- Teachers understand and are facile with the mathematical concepts being taught.
 - Teachers build on students' informal, partial and intuitive understandings of math concepts.
 - Teachers focus on important concepts in depth rather than many topics superficially.
 - Students are presented with a coherent course of study.
 - Teachers use visuals and concrete representations of math concepts and hands-on activities and connect these back to formulas and procedures.
- Teachers model and honor different approaches to solving problems, but ensure that students know the standard formulas and procedures for solving problems.
 - Students explain and justify their mathematical reasoning to each other and to their teachers.
 - Students work in small groups and solve problems together.
 - "Mental math" and estimation is encouraged as a strategy to deepen conceptual understanding.
 - Students learn to interpret numerical and graphical information in documents and text.
 - Students are taught strategies for reading and understanding math problems before solving them.
 - Class time is spent developing mathematical ideas and methods, not practicing skills.

What Does This Mean for State and Local Workforce Leaders?

- Literacy skills of young adults can be improved significantly.
- If young adults are behind in literacy, it will take time, appropriate teaching strategies, high quality and appropriate curriculum materials, and a good sense of an individual student's particular issues to accelerate skills.
- High quality and knowledgeable instructors are key.
- The farther behind a student is, the more individualized instruction he or she will need. Students who are not as far behind can benefit from small group and whole class instruction. Young adults who are behind should not work on their own without significant coaching and interaction with teachers and peers.
- Students who are very far behind should be screened for learning disabilities.
- We need to be realistic about the investment of time needed. Time depends on how far behind a young person is, what the reasons are for their falling behind and if the program offered to them is appropriate. Students who cannot understand the alphabet or do simple arithmetic by the time they are in their teens may need a significant amount of time and motivation to become literate.



Sources

Carnevale, A. P. and Donna M. Desroche. 2003. "Standards for What? The Economic Roots of K-16 Reform," Education Testing Service.

Kamil, M. 2003. "Adolescents and Literacy: Reading for the 21st Century," Alliance for Excellent Education.

Adding It Up: Helping Children Learn Mathematics, National Research Council, 2001.

"Developing Adult Numerate Thinking: Getting Out from Under Workbooks," Focus on Basics newsletter of the National Center for the Study of Adult Learning and Literacy, Sept. 2000.

Ginsberg, L. 1996. "Instructional Strategies for Teaching Adult Numeracy," National Center on Adult Literacy, University of Pennsylvania.

Anstrom, K. "Preparing Secondary Education Teachers to Work with English Language Learners: English Language Arts." National Center for Bilingual Education.

Applebee and J. A. Langer; "Learning to Manage the Writing Process: Tasks and Strategies."

Cotton, K. "Teaching Composition: Research on Effective Practices." Northwest Regional Educational Laboratory (NWREL) School Improvement Research Series, Topical Synthesis #2.

Gillespie, M. K. "Research in Writing: Implications for Adult Literacy Education." National Center for the Study of Adult Learning and Literacy (NCSALL).

Langer, J. A. "Guidelines for Teaching Middle and High School Students to Read and Write Well." National Research Center on English Learning and Achievement (CELA).

ERIC Review: Effective Elements of Developmental Reading and Writing Programs.

National Center for Education Statistics, Remedial Education at Degree-Granting Post-Secondary Institutions (2003).

Curtis, M. E. and Anne Marie Longo. "Reversing Reading Failure in Young Adults." Focus on Basics, Volume 1, Issue B, May 1997.

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Web Resources

General Literacy Information:

National Institute for Literacy (NIFL) <http://www.nifl.gov>

NIFL factsheets http://www.nifl.gov/nifl/facts/facts_overview.html

Office of Adult and Vocational Education (OVAE)
<http://www.ed.gov/about/offices/list/ovae/index.html>

National Institute of Child Health and Human Development (NICHD)
http://www.nichd.nih.gov/crmc/cdb/p_lang.htm

Facts & Figures, a compendium of statistics and research findings about literacy
<http://www.famlit.org/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=2996>

NAEP (National Assessment of Educational Progress) information
<http://www.nifl.gov/nifl/facts/NAEPhtml>

Reports of Interest:

Alliance for Excellent Education: *How to Know a Good Adolescent Literacy Program When You See One: Quality Criteria to Consider.* Issue Brief, 2003.
<http://www.all4ed.org/publications/Criteria%20for%20Adolescent%20Literacy%20Programs.pdf>

Alliance for Excellent Education: *Reading for the 21st Century: Adolescent Literacy Teaching and Learning Strategies*, Issue Brief, January 2004
<http://www.all4ed.org/publications/Reading%20for%2021st%20Century.pdf>

Johnson, C. *For Teens, Phonics Isn't Enough*, Connect for Kids
http://www.connectforkids.org/resources3139/resources_show.htm?attrib_id=309&doc_id=227851&parent=82343

Kamil, M.L. 2004. *Adolescents and Literacy: Reading for the 21st Century*. Washington: Alliance for Excellent Education.
<http://www.all4ed.org/publications/AdolescentsAndLiteracy.pdf>

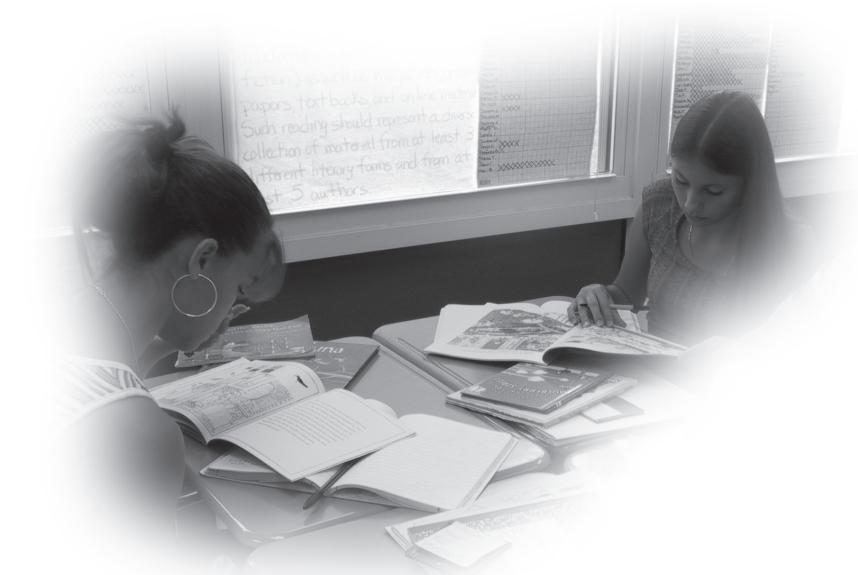
National Institute for Literacy (NIFL) *Summary of the Adolescent Literacy Workshop: State of the Science and Research Needs*. Meeting co-sponsored by Office of Vocational and Adult Education, Office of Special Education and Rehabilitation, Office of Elementary and Secondary Education, Office of Education Research and Improvement, The National Institute for Literacy, The National Institute of Child Health and Human Development,

American Federation of Teachers, American Speech-Language-Hearing Association, International Reading Association, National Education Association.
<http://www.nifl.gov/partnershipforreading/adolescent/summary.html>

RAND Reading Study Group. 2002. *Reading for Understanding: Toward an R & D Program in Reading Comprehension*. Santa Monica, CA: RAND
<http://www.rand.org/publications/MR/MRI465/index.html>

Snow, C. and G. Biancarosa. 2003. *Adolescent Literacy and the Achievement Gap: What Do We Know and Where Do We Go From Here?* New York: Carnegie Corporation of New York.

Strickland, D.S. and D.E. Alvermann. 2004. *Bridging the Literacy Achievement Gap Grades 4-12*. New York: Teachers College Press.





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