E ducators know that adolescence is a difficult time, with social, emotional, and physical stresses that seem to turn our children into creatures from another planet. With all these factors turning adolescents’ world upside down, who thinks to look at whether or not they are reading well? Reading? Didn’t the early grades take care of that? However, what of those students who did not attain early literacy, or attained it with limited skills? What of the adolescent middle or high school student who is functioning with elementary school reading skills? With so much well deserved attention going to early literacy, adolescent literacy is many times forgotten about. This is borne out on the economic level since “state and federal funding for middle and high school reading programs in the United States has decreased,” (International Reading Association Commission on Adolescent Literacy 1999-2000) and Title I and Reading First funds are primarily budgeted for early intervention.

Middle and high school students are expected to read, comprehend, and respond to increasingly complex material, but many students don’t have the basic skills to adequately access this material at a rudimentary level, let alone at the level of sophistication expected of them.

The literacy needs of adolescents differ from those of elementary school students, but they are just as important and are key to academic success. Middle and high school students are expected to read, comprehend, and respond to increasingly complex material, but many students don’t have the basic skills to adequately access this material at a rudimentary level, let alone at the level of sophistication expected of them. To compound the difficulties faced by these at-risk students, by the time they reach high school, teachers are teaching subject matter, not reading skills. The International Reading Association 1999 report indicates the prevalence of the problem by showing how many students’ reading difficulties are bypassed in high school and continue in college: “13% of fall 1989 first-year higher education students in the United States were enrolled in courses devoted specifically to remedial reading.”

The Middle and High School Years

The academic deficiencies of adolescents with language and reading difficulties begin in elementary school. Students develop compensatory strategies that help them through the elementary years, but eventually these stop-gap measures fail to work. For instance, students who compensate by taking more time to accomplish their assignments, by reading passages repeatedly and slowly, will find that, unless they work round the clock, that tactic will no longer work with the more complex material and accelerated work load they begin to encounter in middle school and later in high school.

In addition, as students begin middle school, usually 6th or 7th grade, they are entering a new type of educational environment where there is no longer the single teacher in the same classroom, but different subjects taught by different teachers in various classrooms. There is no one teacher who will get to know them closely enough to see that the difficulties at-risk students are experiencing may stem from reading problems rather than laziness or not paying attention. This type of environment demands more independence from students, giving them a wide variety of subjects to comprehend and respond to, yet many of them still do not have the reading skills to be able to stand alone academically, and they no longer
receive any reading instruction. In middle school, the way teachers teach increasingly emphasizes “reading to learn” rather than “learning to read,” i.e., subject matter rather than skills. As the IRA’s position statement on adolescent literacy observes when discussing middle schools, “Although literacy growth might be recognized as important, many schools do not include reading instruction in the curriculum for all students.”

By the end of middle school, a student’s inability to compensate for a lack of reading skills can become even more problematic. As he or she struggles with academics and adolescence, adjustment problems grow. Should they fail to make the transition to high school, their prospects for ever receiving a high school education decline. A June, 1998 National Center for Education Statistics study, “Subsequent Educational Attainment of High School Dropouts,” reports that one-third of eighth grade drop outs “had no credential and were not pursuing any further education.”

The transition from middle to high school is the time in adolescents’ lives when they are not only going through physical, emotional, and mental changes — new research shows that teenagers’ brains change during adolescence in fundamental ways (Newsweek, May 8, 2000) — but social changes as well, including moving into what could be the final phase of their education. The pressures on adolescents at this stage of their educational career are great, and if the demands are enough to try even the most exemplary student, the strains are many times enough to drive at-risk students to the breaking point. “The ninth grade is a particularly difficult time for at risk students, for they are both at a critical stage of adolescence, and facing a new, impersonal, and more challenging school” (Ascher, Schwartz, Keeping Track of At Risk Students).

Adjustment problems can grow at this time, turning this transition into a larger turning point that will affect the rest of students’ lives. By high school, students who are already struggling to keep up are left behind, and their reaction is manifested many times in disruptive behavior and sometimes in dropping out of school altogether.

**Behavioral Problems in School**

A disenfranchised adolescent is at risk for developing serious behavior problems in school. According to the National Center for Education Statistics’ Schools and Staffing Survey, between 1990-91 and 1993-94 the proportion of teachers indicating that physical conflicts among student was a serious problem rose from 6.5 percent to 8.2 percent. The National Center for Education Statistics reports that a majority of public school principals (78 percent) reported having some type of formal school violence prevention or reduction program during the 1996-97 school year.

In a 1994 National Center for Education Statistics’ longitudinal study, when students were asked if disruptions by other students interfered with their learning, 39.6 percent of eighth-graders in 1988, 39.9 percent of tenth-graders in 1990, and 33.1 percent of twelfth-graders in 1992 responded in the affirmative. In addition, the National Center for Education Statistics’ “Principal/School Disciplinarian Survey on School Violence,” reports that in schools with violence prevention programs, 35-49% of teachers and staff are involved in these programs. These statistics show that almost half of the teachers and staff in some schools are spending time in violence prevention programs rather than teaching academic or vocational subjects. As Ohio’s Governor Bob Taft has said, “Students can’t learn and teachers can’t teach if violence and disruption rule the classroom.”

**Retention – Does it Work?**

“Research has shown...that retaining middle school students does not improve academic achievement and may in fact signal that schools are not helping students compensate for academic deficiencies that began in elementary school” (Wells). And the Consortium for Equity in Standards and Testing found that “Students who repeat a grade
typically do worse academically than those in carefully matched control groups” (Wheelock). Simply having retained students cover the same material in the same way again, hoping that the repetition will help them “get it” isn’t good enough. Accurate diagnosis of what their problems are and specific, effective solutions need to be implemented. If a student can’t read the assignments, having him or her read them again obviously won’t work. Giving them the skills to read at their grade level will.

Adolescence is a difficult time for all students. In a research project involving 1,000 students, Hertzog and Morgan from the Center for Transition Studies at Augusta State University found that as they moved from eighth grade in middle school to ninth grade in high school, students “decreased in their perceptions of: physical appearance, job competence, romantic appeal, behavioral conduct, and, most alarmingly, global self-worth.” The self-image middle and high school students who are retained have of themselves takes even more of a beating since they feel left behind and stigmatized. They feel out of place with students who now, because of the significant physical, emotional, and intellectual changes that take place in adolescents from one year to the next, seem much younger to them. They watch their age contemporaries moving on with their lives while they appear to be at a standstill. And in a society that values achievement, success, and moving on and up, this is devastating. Add to that the fact that they still cannot perform the same work adequately, and you have a formula for disengagement and dropping out. Giving these students the literacy skills to succeed, to be able to read at their grade level and move on to the task of mastering the more advanced content they are receiving, is the way to help them attain the mastery and independence called for in the middle and high school environment.

Students Who Drop Out

The 1995 CPS [Current Population Survey] data confirm earlier findings that students who are retained are at higher risk of dropping out of school. Of the 13.3 percent of 16- through 24-year-olds who repeated one or more grades by 1995, approximately one-quarter had dropped out by 1995, compared to only about 10 percent of the young adults who were never held back in school (24.1 versus 10.1%).
- National Center for Education Statistics

A student who cannot find a way into the material being taught, especially a student who has had a history of being at-risk, will either look for other ways of being involved, through negative and disruptive participation, or will simply drop out altogether. Many students who drop out have become disenchanted with and disenfranchised from their schools because they do not have the skills that allow them to be engaged in their own education. A student will not feel involved if he or she does not have the requisite skills to participate.

Inadequate language and reading skills are often at the root of students not reaching their potential in high school. But many times language and reading problems are not diagnosed in these older students because the focus is on subject matter and the students are adept at covering their deficiencies. These compensations can only work for so long, and as the reading material and related language arts tasks becomes more complex in the advanced grades of high school, a breaking point is reached at which these stop-gap methods no longer work. The International Reading Association pointed out that, the annual “high school dropout rate, which is related to literacy difficulties, was 11% in 1993.”

Dropping out of high school carries social and economic repercussions. A recent “Fragile Families” study determined that in urban areas like Oakland, CA and Austin, TX, nearly half of
young, single mothers and about 40 percent of the new fathers had not completed high school. Further, according to the Department of Education’s National Center for Education Statistics, National Adult Literacy Survey in 1992, full-time weekly wages rise substantially as literacy levels rise. The mean weekly earnings of full-time workers in the third level of prose literacy were 50 percent higher than those in Level 1, and employees reading at Level 5 out-earned their peers in Level 3 by 72 percent.

A Call to Action

At the recent High School Leadership Summit held October 8, 2003, Secretary of Education Rod Paige told how “[a]bout half of the high schools in our 35 largest cities, less than half of ninth-graders graduate four years later.” Secretary Paige also cited a recent report by the Organization for Economic Cooperation and Development which found that “American students read, write, and do math at rates lower than students in Asia and Europe. Today, our high school graduation rates fall short of the OECD average.” Acknowledging how unacceptable this situation is, Secretary Paige stated that, “High schools of all sizes and shapes need improvement….No one should be complacent. School leaders must set challenging expectations for all students and engage them with learning.”

Secretary Paige characterized the type of high school reform that is needed in the following way: “We must pay attention to factors like time on task, opportunities to practice, providing quality feedback, and using meaningful assessments of student achievement.” The Fast ForWord® products give students the opportunity to practice the skills they need to learn effectively and efficiently, focused time on task that moves them in a graduated manner towards proficiency in language and reading skills, and daily, detailed feedback on their achievement that helps teachers make appropriate interventions and determine suitable curriculum offerings.

A Proven Remedy for At-Risk High School Students

The Fast ForWord products can help at-risk students learn the language and reading skills they need to “get back on track” and back into the classroom. Students who enter high school deficient in language and reading skills need an expeditious way to catch up that will enable them to stay in school and be successful. The Fast ForWord software can help them do this by rapidly building language and reading skills such as phonemic awareness, listening accuracy, phonics skills, fluency, vocabulary, comprehension, working memory, syntax, grammar, sequencing, and other critical skills necessary to being a good reader.

Students who enter high school deficient in language and reading skills need an expeditious way to catch up that will enable them to stay in school and be successful.

Grounded in over 30 years of scientifically based research into the way the brain learns, the Fast ForWord products develop the cognitive skills that support reading. Scientific Learning calls these cognitive skills Learning MAPs™.

- **Memory**: Working memory helps students retain information they have read while they are comprehending a passage.

- **Attention**: Focused and sustained attention allows students to concentrate on reading without being distracted.

- **Processing**: Good processing allows students to accurately assimilate information, whether it be the content or sound of words.

©2006 Scientific Learning Corporation
• **Sequencing:** With good sequencing skills, students can maintain the order of what they read, such as the order of letters in a word, or the appropriate order of words in a sentence.

The *Fast ForWord* products develop these Learning MAPs through the FAST Power Learning Formula™ - research-based techniques of Frequency and intensity, Adaptivity, Simultaneous development, and Timely motivation - to accelerate learner improvement.

The *Fast ForWord* products use the unique technical advantages of the computer to instruct children in the skills they need to read and learn. Scientific Learning’s *Fast ForWord* computer software offers unique possibilities for enabling students to hear the phonemes and sounds of language by slowing them down and digitally enhancing them so that they can be differentiated. *Fast ForWord* computer software also progressively and gradually changes the degree of exercise difficulty to adapt to each individual student’s incoming skill level and ongoing progress. By using adaptive algorithms, *Fast ForWord* software maintains a 75-80% success rate; as the student improves the exercises automatically become more challenging. The products’ ability to evaluate the student’s progress and automatically increase or decrease the task difficulty provides just the right amount of challenge and reward and, therefore, creates a highly motivating learning opportunity.

The student tracking component of the *Fast ForWord* products, *Progress Tracker*, provides clear, action-oriented information on individual, class, or group performance. Automatic analysis, including diagnostic and prescriptive information, is displayed in graphs and tables. Timely and specific intervention guidance provides educators with recommendations to maximize the impact of classroom reading instruction and the effectiveness of the *Fast ForWord* products. Administrator reports compare progress for participants based on demographics such as gender, grade, ethnicity, and other selective socio-economic factors such as At-Risk, Bilingual, Title I, and more. Exercises are aligned to state standards and correlated to major basal programs.

Field studies have demonstrated that by providing intervention with the *Fast ForWord* products for at-risk students, the number of students with language, reading, and learning difficulties will dramatically decrease. In addition, classroom behavior typically improves while related discipline issues decrease.

Scientific Learning is confident that the students who complete *Fast ForWord* activity will substantially improve their abilities in reading, language, listening, thinking, and communicating. Developing these foundation skills leads to improved ability to gain information in the classroom, with students typically experiencing higher levels of proficiency in many subject areas. Anecdotal evidence has shown that after participating in *Fast ForWord* activity, students have greater self-esteem and fewer behavior problems, are more engaged in classroom activities, and are more effective in their ability to interact with parents, teachers, and peers. Generally, they develop a stronger motivation to learn and experience greater success in the classroom.

**Improvements in Comprehensive Language Skills for Adolescents and Adults**

The Clinical Evaluation of Language Fundamentals, Third Edition (CELF-3) is a comprehensive test that identifies language skill deficits. The CELF-3 measures an individual’s ability to understand words and sentences, follow directions, recall and formulate sentences, and understand relationships between words and categories. These are skills that are critical for reading and writing, as well as for understanding classroom instruction and participating in classroom activities.

One-hundred-eleven individuals, ages 12-20, took the CELF-3 before and after working...
with *Fast ForWord Language*. Prior to *Fast ForWord* activity, the adolescent participants performed below the average range on receptive language, expressive language, and total language scores with mean scores of 76, 77 and 76 respectively. After an average of 29 days of *Fast ForWord Language* participation, these individuals demonstrated an average gain of more than 10 points. At post-testing, they performed within the average range with mean scores of 88 on receptive language, 89 on expressive language and 88 on the total language score.

The adolescents who participated in the above study used *Fast ForWord Language*. Scientific Learning’s *Fast ForWord Middle & High School* is based on *Fast ForWord Language* and is designed for middle and high school learners who want to improve thinking, listening and reading skills. The interactive exercises of *Fast ForWord Middle & High School* reinforce and strengthen basic language and reading skills while challenging students to develop organizational skills and the critical communication skills necessary for better reading. The product’s sports-theme stories and exercises create a compelling framework that keeps adolescent and adult students engaged while developing listening and reading comprehension, working memory, syntax and grammar skills, critical thinking, sustained and focused attention, organizational skills, vocabulary, and morphology.

### A New Time for Adolescent Literacy

In its position statement, the International Reading Association Commission on Adolescent Literacy 1999-2000 states that, “In the United States, most Title I budgets are allocated for early intervention — little is left over for the struggling adolescent reader. Even if all children do learn to read by Grade 3, the literacy needs of the adolescent reader are far different from those of primary-grade children.” They also point out that, “Emphasizing the achievement of early readers has not produced adolescents who read and write at high levels of proficiency,” citing statistics that “13% of fall 1989 first-year higher education students in the United States were enrolled in courses devoted specifically to remedial reading,” and the “high school dropout rate, which is related to literacy difficulties, was 11% in 1993.”

> “I don’t have to work so hard to listen to what the teacher is saying. I can listen to what she is teaching.”

The IRA’s emphasis on the reading issues peculiar to adolescents and many educators’ and parents’ concern about students dropping out of school are really the same concern: students need to develop their receptive and expressive language skills in order to be able to participate in their own education and not become so alienated that they drop out. By supplying the language skills that any student needs as a basis for reading, listening, thinking, and participating successfully, the *Fast ForWord* products can help students who are on the line between participation and alienation stay involved, and can help bring back those who have already become disenfranchised. A new awareness of the problems encountered by

©2006 Scientific Learning Corporation
adolescent students is growing. We now have the opportunity to bring students with reading and behavioral difficulties back into full participation in the classroom. As one 13 year-old student said after participating in Fast ForWord activity and experiencing 3 years improvement in four months, “I don’t have to work so hard to listen to what the teacher is saying. I can listen to what she is teaching."

References


—. “Principal/School Disciplinarian Survey on School Violence.”

—. “Schools and Staffing Survey.”


Paige, Rod. “Prepared Remarks for Secretary Rod Paige at the High School Leadership Summit.”


Additional Fast ForWord research results may be found on the Scientific Learning website at:
www.scientificlearning.com

Joseph Noble, Ph.D.
Manager, Grants and Proposals
Scientific Learning
jnoble@scilearn.com

©2006 Scientific Learning Corporation