

SECTION A: Excerpt from: *Advancing Our Students' Language and Literacy: The Challenge of Complex Texts*

Marilyn Jager Adams is a research professor in the Cognitive, Linguistic, and Psychological Sciences Department of Brown University and former chief scientist for Soliloquy Learning Inc. She is the author of numerous scholarly papers and several books, including two landmark works: Beginning to Read: Thinking and Learning about Print and Phonemic Awareness in Young Children. This article is adapted with permission of the Guilford Press from "The Challenge of Advanced Texts: The Interdependence of Reading and Learning," which Adams wrote for Reading More, Reading Better, edited by Elfrieda H. Hiebert, copyright 2009 by Guilford Press.

Few Changes on SAT Posted by Class of 2010."¹ "Scores on SAT College Entrance Test Hold Steady."
"Class of 2008 Matches '07 on the SAT."³ Year by year, point by point, it is hard to see the real news in these headlines. The real news is not that the SAT scores have held steady. The real news is that the SAT scores haven't increased. The SAT scores of our college-bound students have been languishing not for one or two years, but for a long time. Several decades ago, scores were much higher.

The SAT score decline began in 1962, nearly 50 years ago. From 1962 to 1980, math scores fell 36 points to 492 while verbal scores fell 54 points to 502. Since 1980, the math scores have been gradually climbing back and are now at 516. Fluctuations aside, the verbal scores remain unchanged, even today stuck at 502.

If I were writing the headline for the next newspaper story on the SATs, here's what you'd see: "Seniors and Their SAT Scores Sabotaged by Low-Level Textbooks." And if the copyeditor would let me, I'd add an exclamation point! The literacy level of our secondary students is languishing because the kids are not reading what they need to be reading. This is a strong claim. Let me lay out the evidence and argument so you can judge for yourself.

Not Just the SAT Scores

To be sure, whether scores on the SAT exams truly reflect relevant or important intellectual or academic proficiencies remains a topic of discussion.⁴ Yet, the SATs are not the only indication that the literacy growth of our secondary students has fallen behind. Between 1994 and 1998, the United States joined 19 other developed countries in an international evaluation of adult literacy levels.⁵ As compared with their peers in the other countries, the literacy scores of older U.S. adults (36 years old and up) were quite high, ranking in the top five. In contrast, the scores for younger U.S. adults (35 years old or less) ranked in the bottom half of the distribution by every measure. Among young adults with a high school diploma or less, those from the United States fell at the bottom of the pile, ranking 19th out of 20. Even among participants who had completed four or more years of postsecondary education, the scores of our young adults were below the average for same-aged and like-educated peers in the other countries. The young adults in this study would have graduated from high school between 1974 and 1998, during the period when the verbal SAT scores were bottoming out.

In international assessments of schoolchildren, the performance of our fourth-graders is above average. However, the performance of our high school students is average, at best.⁶ The results of our own National Assessment of Educational Progress (NAEP) show a similar contrast: while the reading of

Adams: Advancing Our Students' Language and Literacy

younger students has been improving over time, that of older students has not. NAEP's analysis of changes in reading performance between 1971 and 2008 shows that average scores of 9-year-olds increased by 12 points. Those of 13-year-olds increased by 4 points. But the average scores of 17-year-olds have not changed.⁷ The lack of progress among 17-year-olds is especially jarring when factoring in our dropout problem. Roughly 25 percent of eighth-graders nationwide drop out of school before completing high school;⁸ presumably, those who stay in school, and therefore participate in NAEP as 17-year-olds, disproportionately include the more successful and motivated students. One can't help but wonder whether they were trying hard when they took the tests, since there is no personal consequence for doing well or poorly on the international trials or on NAEP.

On the other hand, college entrance examinations are voluntary, and performing well on them is the very point of taking them. ACT (known until 1996 as the American College Testing Program) tracked the literacy scores of eighth-, tenth-, and twelfth-graders on ACT college readiness and entrance exams.⁹ For each of the cohorts examined (and regardless of gender, race/ethnicity, or household income), the students were collectively on track in the eighth and tenth grades for better scores than they ultimately obtained in the twelfth grade. ACT's report concludes that there is a specific problem at the secondary school level.*

Taking a closer look at the poor performance of students on its college entrance exam, ACT determined that the major stumbling block for students is complex texts. The maximum score on the reading component of the ACT college entrance exam is 36; scores of less than 21 predict reading difficulties in college coursework and also in the workplace. Among students who took the ACT exam in 2005, the scores of 51 percent—more than half—fell below 21. And among that 51 percent, average performance on the complex texts was at chance levels (i.e., random guessing would produce the same scores).

SAT Decline Prompts Investigation

Back in 1977, having watched SAT scores fall for 15 years, the College Board, which developed and administers the SAT, engaged a panel to try to identify the underlying causes of the decline.¹¹ A first hypothesis to be checked was whether the test had somehow become more demanding. But, no, to the contrary, indications were that scoring had become more *lenient*.¹² A second prominent hypothesis was that the decline was due to changes in the demographics of the test takers. Analyses showed this hypothesis to be largely correct, but only for a brief while. Over the early 1960s, changes in the composition of the tested population accounted for as much as three-quarters of the test score decline—and, no wonder, for during this period the number of students taking the SAT tripled. Over the 1970s, however, though the test-taking population stabilized, the scores did not. Instead, the decline continued, even steeper than before, while the extent to which it could be ascribed to demographic shifts shrank to 30 percent at most.¹³ Furthermore, *the scores that dropped most were those of the strongest students, the students in the top 10 percent of their class*; the scores of students toward the bottom of the distribution held steady or even increased.¹⁴

Another hypothesis examined by the College Board's panel was that the reading selections on the tests had somehow become too hard for the students. Reading researcher Jeanne Chall and her colleagues tested this hypothesis by sampling passages from SAT tests administered between 1947 and 1975, and using readability analyses to compare their difficulty.¹⁵ The data indicated that the SAT passages had actually become *easier* over this period—so scores should have been going up. Further, between 1963 and 1975, during the years of the score decline, the average difficulty of the test passages lay at the

Adams: Advancing Our Students' Language and Literacy

eleventh-grade level, which should have been solidly in range for twelfth-grade college-bound students. Yet scores were going down.

Chall thought there had to be some reason why the twelfth-graders were not able to read eleventh-grade texts. With this in mind, she and her colleagues evaluated popular eleventh-grade textbooks in history, literature, grammar, and composition. *The average difficulty of the textbooks lay between the ninth- and tenth-grade levels.*

Could this discrepancy between the reading level of the SAT and that of the textbooks explain the score decline? If students had neither practiced nor been instructed with reading materials as hard as the SAT passages, then one could hardly expect them to read the latter with competence and confidence. By the early 1990s, SAT scores appeared to have plateaued. The College Board decided to “recenter” the scale by adding about 80 points to the verbal scores (and about 25 points to the math scores) so as to return the mean of each test to a value close to 500 points.[†] Beleaguered, the College Board also changed the name of the test from the Scholastic Aptitude Test to simply the SAT, with the letters standing for nothing.

A Closer Look at Textbooks

In the 1980s and 1990s, another team of researchers, led by Donald P. Hayes, returned to Chall's hypothesis, extending her work with a revealing series of studies. In one of the most extensive, they analyzed the difficulty of 800 elementary, middle, and high school books published between 1919 and 1991.¹⁶ Their results indicated that the difficulty of the text in these books had been significantly reduced and, further, that the years over which this reduction occurred were temporally aligned with the SAT score decline.

As one indication of this trend, the average length of the sentences in books published between 1963 and 1991 was shorter than that of books published between 1946 and 1962. In the seventh- and eighth-grade textbooks, for example, the mean length of sentences decreased from 20 words to 14 words—“the equivalent of dropping one or two clauses from every sentence.”¹⁷ Meanwhile, the sophistication of the books' wording also declined. The wording of schoolbooks published for eighth-graders from 1963 forward was as simple as that in books used by fifth-graders before 1963. Worse, among literature texts required in English classes, the wording of twelfth-grade texts published after 1963 was simpler than the wording of seventh-grade texts published prior to 1963.

Continuing their investigation, the researchers found that it was especially schoolbooks for students in grades 4 and up that were simplified in the years after 1962. Moreover, although the wording of schoolbooks for children generally increased across grades 1 through 8, the same was not true of high school books. *Across grades 9 through 12 (including texts for Advanced Placement courses), the difficulty levels of the literature books were shown to differ little from one another or from the grade 7 and grade 8 offerings.* One bright spot was high school students' science texts, which were significantly more difficult than their English books. However, even among science texts, only those designated for Advanced Placement coursework evidenced difficulty levels comparable to that of the average daily newspaper for adults.

Adams: Advancing Our Students' Language and Literacy

Such a disparity between the students' schoolbooks and the passages on the SAT might well explain the decline in SAT scores. More significantly, failing to provide instruction or experience with "grown-up" text levels seems a risky course toward preparing students for the reading demands of college and life. To wit, while the analyses of Hayes and his colleagues showed that textbooks had become progressively easier over the century, they also indicated that the difficulty of English language newspapers had remained nearly constant.¹⁸ Could this disparity be a factor in the declining circulation of newspapers? Similarly, they found the level of the wording of scientific magazines, whether aimed at professionals or laypersons, had increased dramatically from 1930 to 1990.¹⁹ If it is a national goal to inspire more students to become engineers and scientists, then shouldn't the difficulty of our schoolbooks have increased alongside? If a goal is to ensure that our students will be able to stay sufficiently informed about scientific progress to conduct business, reflect on policy, and manage their family's health and education, then at a minimum, shouldn't the difficulty of our schoolbooks keep pace with the difficulty of scientific publications aimed at the general public?