A Crash Course in College Preparedness

Start sharpening your analytical skills early and don't shy from a challenging read

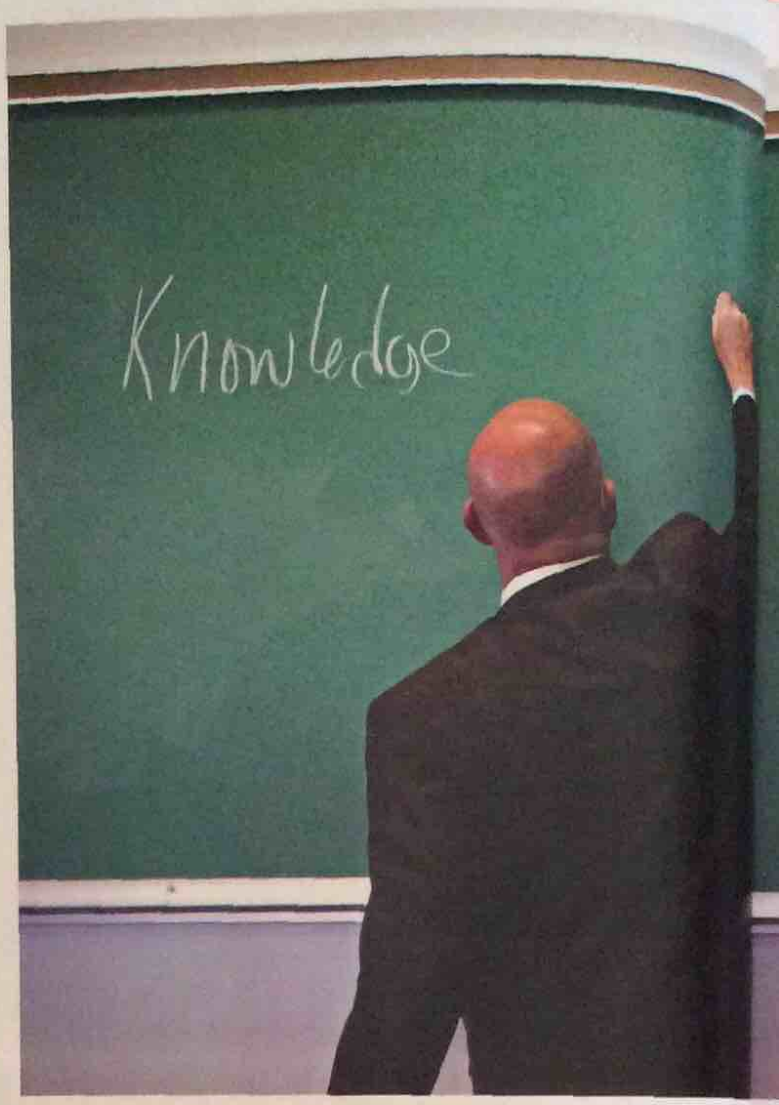
By Carol Frey

If colleges could shine a light inside the brains of high school students, they would be looking for synapses well prepared to grapple with math, science, and literature. But all too often today, what colleges would see would disappoint them.

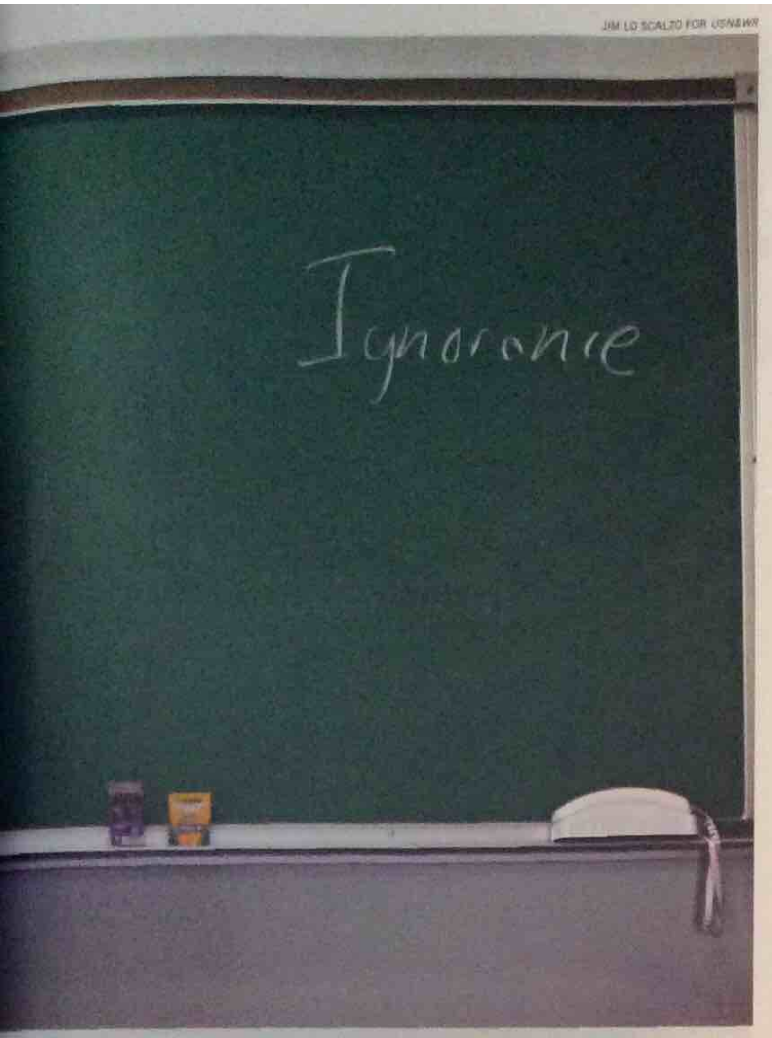
Many students are arriving on campus with few tools to succeed. Of the high school students in the class of 2009 who took the ACT test, for example, fewer than one quarter met each of the benchmarks for college readiness in math, science, English, and reading. Just over a quarter met none of them. In a 10-year study of students, those who did meet the benchmarks had higher college grade point averages, completed their freshman courses, and had a significantly greater chance of graduating, according to Cynthia Schmeiser, president of ACT's education division. Those who didn't meet the benchmarks fared worse on all counts. "The colleges receiving the most applications can afford to be more selective, and readiness isn't a predominant issue," Schmeiser says. "It's the less selective schools that are confronting the readiness problem."

Even those B students who take all the college prep courses required for high school graduation can end up on campus in need of remedial classes in reading, writing, math, or all three, says David Spence, president of the Southern Regional Education Board. The problem, says Spence, is that college professors expect students to have more analytical skills than fact-heavy high school courses provide. What's more, educators don't agree on how high school classes should be taught differently. "We have to get higher education to speak with one voice on standards," says Spence, who collaborated with the National Center on Public Policy and Higher Education on a new report that calls for state standards of college readiness. Indeed, a coalition of 48 states is working on a nationwide set of core curriculum standards, and the Obama administration's Blueprint for Education Reform advocates the dramatic new goal of requiring that all high school graduates by the year 2020 be "college and career ready."

But educators do agree on the courses that students should take in high school: four years of English at the college-preparation level; four years of science including two lab sciences; four years of social sciences such as history and economics; and, increasingly, four years of math. "If you take a year off from math, when you take your college math placement exam, you could find yourself in a remedial class that doesn't qualify for financial aid or count toward graduation," warns Jacqueline King, who directs the American Council on Education's Center for Policy Analysis. To be ready for the college-level algebra required of most freshmen, for example, means taking algebra I and II courses and trigonometry in high school. A statistics class, besides being good math practice, can help with the study of social sciences, says Robert R. Neuman, former associate dean for academic development at Marquette University. Students who skip math in their senior year will need to brush up. Take a summer math course for practice at a community college, suggests King, or do the readings and homework assignments for a free online math course such as those on MIT's OpenCourseWare website.



Even in the right college prep classes, today's students may need to push themselves to develop critical-thinking skills. Work on reading and understanding—early and often, experts advise. There will be more reading in college, and more complicated reading, than you might expect. A growing worry of educators over the past few years is that high school students aren't practiced enough at interpreting and drawing conclusions as they study complex texts. When college professors and employers were surveyed a few years ago by the policy research group Achieve about how well prepared high school graduates are for college and work, 70 percent of professors (and 41 percent of employers) said students' inability to read and understand



complicated material is a serious deficiency.

Gaining that ability requires reading lots of tough material, right through senior slump time and over the summer. "Colleges' lists of must-read books are remarkably similar," says Mark Conley, an associate professor of teacher education at Michigan State University and president of the Michigan Alliance of Reading Professors. "Check it out for your school." Or choose from the nonfiction bestseller list in the *New York Times*, King suggests, and read books on public policy or history.

"They don't need to buy *60 Ways to Improve Vocabulary*," says Carol Jago, president of the National Council of Teachers of English. "The best way is to read 40 books in a year and not just *Twilight*." She suggests three in particular: *The Omnivore's Dilemma* by Michael Pollan, *Cod: A Biography of the Fish That Changed the World* by Mark Kurlansky, and *Guns, Germs, and Steel: The Fates of Human Societies* by Jared Diamond. "These are books that develop stamina, and that's one of the reasons kids have trouble in college," Jago says.

Also pay attention to how these books are written, says Princeton University English professor Susan Wolfson. "To analyze connections between ideas means reading newspapers and magazines with attention to how arguments are structured," Wolfson says.

Budding scientists must hone their literacy and analytical thinking skills, too. "They need to read at the level of *Scientific American* and the science section of the *New York Times*," says Bonnie Bassler, the Squibb professor of molecular biology at Princeton and director of its Council on Science and Technology. Even many well-prepared Ivy Leaguers aren't as curious as they should be to pursue scientific disciplines. Bassler says she sees this in her fall Molecular Biology 101 class and her spring Microbiology 214 class. "The material isn't quantitatively different. The attitudes are," she says. Students who take the survey course in the fall don't see themselves as scientists, whereas those who take the 200-level course plan to go on. "In the fall, they think they can't be scientists. In the spring, they think they can," Bassler says. "Why do people think they can learn history and they can't learn science? They're not taught those skills anymore."

Many academics suspect that misuse and overuse of technology is partly responsible for the decline in college readiness. Though the Internet is a valuable tool, for example, it's just as easy for students to use it the wrong way in academic research and writing as it is to use it effectively.

One example of the right way is to give the information in a carefully reviewed scholarly journal greater weight than that found in the public contributions to Wikipedia online, says Jacob Vigdor, a Duke University professor of public policy and economics. "I see plenty of citations of Wikipedia, where there's no quality control," says Vigdor. Michigan State's Conley has seen numerous accusations of plagiarism lodged against students who cut and paste freely from the Internet. And a study by Vigdor and a Duke University colleague, published by the National Bureau of Economic Research in June, showed that declining reading scores among half a million North Carolina fifth- through eighth-graders correlated to the spread of home computers in their neighborhoods.

College readiness also includes having self-restraint and the ability to make hard decisions about priorities. Chelsea Crane of Montgomery, Texas, was faced with many tough choices as a freshman in 2009 at Sam Houston State University. She immediately threw herself into sorority, student government, and other activities, and scheduled as many classes as she could at 8 a.m. to get them out of the way each day. "But I wanted to go dancing and skiing and other things, so it was hard to make that 8 o'clock class," Crane says.

Fortunately for her and others like her, Sam Houston State is among the colleges that have invested heavily in advising. All students pay a $50 fee each semester to support an energetic full-time staff in the Student Advising and Mentoring Center. When she faced a D in one course, Crane's adviser made more regular consultations a priority to help her reach her goal of a political science degree. "They're your high school counselor on steroids," Crane says.

As Crane discovered, the wise student is one who doesn't hesitate to seek out help on campus. An even wiser one, many would agree, starts the journey with some curiosity and critical thinking long before freshman year. ●

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