

Secondary Schools and Colleges Must Work Together

by Michael W. Kirst

American postsecondary education policymakers place much less emphasis on student success at broad access institutions than on access to postsecondary education.¹ By broad access postsecondary education, I mean two- and four-year colleges and universities that accept all qualified applicants. About 80 percent of postsecondary students attend such institutions, which make up 85 percent of postsecondary institutions.² Policymakers need to pay more attention to student success at these institutions because completion rates for students at broad-access colleges and universities are shockingly low. Fewer than one-fourth of community college students who begin college between ages 17 to 20 transfer or attain an associate's degree or vocational certificate. Only half of the students in four-year broad access colleges obtain a degree within nine years. One major cause of the dismal college completion results at these institutions is inadequate preparation in their pre-college education. Remediation rates for entering students are over 60 percent for community colleges and near 30 percent for four year colleges.³

This paper focuses on high school academic preparation and the knowledge and skills students need to enter college without remediation and to complete their desired programs. (In this article, I consider only students who enroll directly after high school.) After analyzing several causes of the problem, I stress that neither K-12 nor postsecondary education alone can solve the problem of the lack

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of student success. My hope is to provide specific policy levers to help forge a new relationship for K-16, given that K-12 and higher education must work together to accomplish their mutual goals of increasing student college success.

A major cause of inadequate college preparation is the disjuncture between K-12 and higher education in the areas of policy, finance, academic standards, and communication. This extreme disjuncture between K-12 and broad access postsecondary education did not always exist, but it has evolved and is now a deep fissure that will be very difficult to mend. Community colleges were once part of K-12 school districts in California, for example, but now are detached from K-12. Many

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broad access four-year colleges were once normal schools. For both community colleges and four-year institutions, prestige emanates from moving closer to research universities and away from identification with K-12 institutions and systems. Consequently, secondary school students and teachers receive fewer and weaker signals about what students must know and do to prepare themselves academically to succeed in broad access colleges.

The origin of the disjuncture between K-12 and higher education in the United States stems (ironically), in part, from the laudable way the nation created mass education systems for both K-12 and higher education. In Europe, by contrast, the higher grades of secondary education were designed for an elite group who would go on to universities. European universities have long played a major role in determining the content of the secondary school curriculum and both the content and format of secondary school examinations. For example, professors at British universities such as Oxford and Durham grade the A Levels taken by students during their last year of secondary education, and these essay exams figure crucially in a student's chances for university admission.

At one time, U.S. colleges and universities played an important role in the nation's high schools.⁴ In 1900, the College Board set uniform standards for each academic subject and issued a syllabus to help students prepare for college entrance subject-matter examinations. (Prior to that, each college had its own entrance requirements and examinations.) Soon after, the University of California began to accredit high schools to make sure that their curriculums were adequate for university preparation.

But in the postwar years, the notion of K-16 academic standards vanished. "Aptitude" tests such as the SAT replaced subject-matter standards for college

admission, and secondary schools added elective courses in nonacademic areas, including vocational education and life skills. Today, K–12 faculty and college faculty may belong to the same discipline-based professional organizations and unions, but they rarely meet with one another. K–12 policymakers and higher education policymakers cross paths even less often.

With the exception of the advanced placement program, there are no major efforts to provide curricular coherence and sequencing between the senior year and postsecondary education, and the role of the senior year in high school as a forum for general education with college is rarely discussed by either entity. Nor has any-

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one proposed a conception of liberal education that relates the academic content of the secondary schools to the first two years of college. Instead, students face an eclectic academic muddle in Grades 10 through 14 until they select a college major. In Ernest Boyer’s metaphor, postsecondary general education is the “spare room” of the university, “the domain of no one in particular” whose many functions make it useless for any one purpose. The functional “rooms”—those inhabited by faculty—are the departmental majors.⁵

When attention is paid to general education, two contending theories predominate. One holds that the purpose of general education is to prepare students for a specialized major; the other, that the purpose of general education serves as an antidote to specialization, vocationalism, and majors. Reformers hoped that somehow the specialized interests of the faculty could be arranged in interdisciplinary forms that would provide a framework for a coherent general education, but there is little evidence that this is happening.

In sum, the high school curriculum is unmoored from the freshman and sophomore college curriculum and from any continuous vision of liberal education. Policymakers for secondary and postsecondary schools work in separate orbits that rarely interact, and the policy focus for K–16 has been more concerned with access to postsecondary education than with the academic preparation needed to complete a postsecondary degree or certificate. Access, rather than preparation, is also the theme of many of the professionals who mediate between the high schools and the colleges: high school counselors, college recruiters, and college admissions and financial aid officers.

The 2006 High School Survey of Student Engagement, based on a national sample of students from grades 9 through 12, reveals some major concerns about

college preparation and completion:

- Fewer than half of the students go to high school because of what happens in the classroom
- A great majority of students are bored every day, if not in every class
- 43 percent spend an hour or less each week doing written homework, 83 percent spend five hours or less
- 55 percent spend an hour or less each week reading and studying for class, 90 percent spend five hours or less
- Students want more active learning such as peer working groups and presentations, and
- Girls report being more engaged across all dimensions of high school engagement than boys. (Girls were 58 percent of four-year college graduates in 2006.)

Considering that more than 70 percent of high school graduates now go on to postsecondary education, this study reveals that many of them are at-risk students who will not be successful.

This lack of engagement is reflected in national test scores. Recent National Assessment of Educational Progress (NAEP) results in reading demonstrate a decline between 1992 and 2005. The results do not bode well for aspirations of higher academic readiness, college preparedness, and college success. The test was given between January and March 2005 to a representative sample of 21,000 high school seniors attending 900 public and private schools. Exams



in reading, math, science, and writing also were administered to fourth and eighth graders. The results revealed that the reading skills of 12th graders tested in 2005 were significantly worse than those of students in 1992, the first time a comparable test was given, and essentially flat since students took the exam in 2002. The share of students lacking even basic high school reading skills—meaning they could not, for example, extract data about train fares at different times of the day from a brochure—rose to 27 from 20 percent in 1992. The share of those proficient in reading dropped to 35 from 40 percent in 1992. Yet, high school graduates in 2005 had studied more than their counterparts in 1990,

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averaging 360 more hours of classroom instruction during their high school years. Their grade point average was a third of a letter grade higher than in 1990, and more students were taking foreign language and other courses aimed at preparing them for college. The poor reading scores of 12th graders puzzle educators because the number of students who took four years of English is up from 40 percent in 1990 to 68 percent in 2005. Moreover, the average grade in English is also higher.

A 2007 study released by ACT, the college admissions testing company, found mismatches between high school course content and what college teachers want students to know. High school teachers in all content areas (English/writing, reading, mathematics, and science) tended to rate far more content and skills as “important” or “very important” than did their postsecondary or remedial counterparts.

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English/Writing: Postsecondary instructors ranked mechanics more frequently among the most important groups of skills for success in an entry level, credit-bearing postsecondary English/writing course, while high school teachers’ rankings of these strands were generally lower. The survey responses of postsecondary English/writing instructors suggest that high school language arts teachers should focus more on punctuation and grammar skills to better prepare their students for college-level expectations in college composition courses.

Mathematics: High school mathematics teachers gave more advanced topics greater importance than did their postsecondary counterparts. In contrast, postsecondary and remedial-course mathematics instructors rated a rigorous under-

standing of fundamental underlying mathematics skills and processes as being more important than exposure to more advanced mathematics topics.

Science: High school science teachers consistently rated science content as more important to student success than science process/inquiry skills. These responses are in direct contrast to those of postsecondary science teachers, who consistently rated science process skills higher in importance than science content.

At broad access two- and four-year colleges, placement exams are the crucial standard that students confront when they enter, and they are the pathway to credit-level courses.⁶ Many students in broad access colleges receive weak and confus-

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ing signals about necessary academic preparation to pass placement exams. Consequently, they are not prepared for these exams and end up in remedial courses. Further, college placement exam revisions have not been part of the K-12 standards movement that has swept across the U.S. Indeed, placement exams are rarely part of the college readiness discussion because standards policies for K-12 and higher education are decided in orbits that rarely intersect.

Research on the content, reliability, and necessary preparation for placement exams is scant; placement standards are not well publicized to prospective students or secondary school teachers. The content, cognitive demands, and psychometric quality of placement exams are a “dark continent” in terms of the assessment research literature. Students are admitted to the postsecondary institution under a low standard, but placed in credit courses or remediation at a higher standard. Secondary school students wrongly believe that their high school graduation requirements are sufficient for them to be placed in postsecondary credit-level courses, and they rarely know about the possibility of placement exam failure that leads to starting college in remedial, non-credit courses. Students who begin in remedial reading and math courses have a lower probability of finishing their desired academic programs (including gaining vocational education certificates).⁷ Remediation is a poor pathway from high school to college; entering college and taking credit-level courses leads to better outcomes.

To address the problems identified in the studies cited above, states must create reforms in four key policy areas: (1) curricula and assessment, (2) finance, (3) data collection, and (4) the public reporting of student progress and success. And they must connect elementary and secondary education with postsecondary education. Governance mechanisms must reinforce and sustain these efforts.⁸

Specifically, state governments can make substantial gains toward improving college readiness and completion if they:

STIMULATE HIGH SCHOOLS and colleges to align their courses and assessments to improve college readiness.

Currently, the standards movement in K–12 education and efforts to improve higher education are operating on different tracks. For example, a widespread strategy to improve student readiness for college has been to increase enrollment in college-preparatory courses. Yet, despite some successes, remediation rates in colleges have remained high. As a nation, we are learning that the number of courses that high school students take, and the units and names assigned to those courses, are often inadequate proxies for whether or not high school graduates are prepared to succeed in college-level work. The quality and level of the coursework and instruction in high school—and their degree of alignment with postsecondary expectations—are the key elements of effective reform.

PROVIDE INCENTIVES in state budgets for increasing the proportion of students who complete high school and enroll in college.

Most state systems perpetuate the divide between K–12 and higher education by creating separate, aggregated streams of financial support for each sector. State budgets lack incentives to promote college-readiness reforms. States should offer financial incentives to both systems to offer dual enrollment or to reduce remediation.

CREATE DATA SYSTEMS to track student progress across educational levels and institutions.

Most states can't determine if their efforts to improve student readiness for college are having any impact. Although many states are working to improve their ability to gather information—Florida already has a model system up and running that links K–12 and postsecondary education, along with other public data—few, if any, other states currently link information from schools and colleges. Some states do not even collect data on the course-taking patterns of their high school students. Consequently, in those states, it is impossible to determine the relationships between the courses that high school students take and students' persistence and success in college.

REPORT STUDENT PROGRESS and success from high school to postsecondary education.

To be effective in improving college readiness, states should establish student-achievement objectives and require their education systems to collaborate on reaching them. Determining how to use information gathered on student progress to improve teaching and learning is an ideal area in which high schools and colleges should collaborate. High schools should use data about their graduates' performance in college to improve their curricula, instruction, and grading practices. States and institutions must do a better job of communicating this and other information.

Another area of concern is improving the *signals* that colleges give to high school students, parents, and teachers about what they require. (In economic theory, signaling refers to one entity conveying meaningful information about itself to another entity through various means.) Clear, consistent, and reinforced signals about these standards will enhance the “college knowledge” of prospective students in secondary schools.

If these signals are embedded within incentives that motivate students, they will be more effective, especially if the incentives help students be admitted to universities, meet placement exams standards, and complete their desired degrees (or

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community college competencies).⁹ Examples of incentives could be admission policies that reward students for completing numerous college preparation courses, or teacher professional development that helps increase the probability of students meeting placement test standards.

Signaling theory suggests that aligning and streamlining appropriate content messages have a positive impact on students' learning and achievement, and that mixed and conflicting signals—the current state of affairs—have the opposite effect. Educators, counselors, and administrators can be purveyors of information (signals) about what students need to know and be able to do to succeed at postsecondary education.

The key is whether K-12 and postsecondary signals and incentives for students are delivered in isolation from one another or through interaction and reinforcement. Three possible scenarios for signal delivery include: (1) postsecondary education drives policy, (2) K-12 drives policy, or (3) the combined efforts of K-12 and postsecondary education drive policy. The preferred delivery is, of course, the collaborative approach.

Joint efforts between postsecondary and K-12 education are crucial in creating positive outcomes for more students—particularly those from economically disadvantaged families, families in which a parent did not attend college, and those students who face stigmatization and racism as they proceed through school. If there is no K-16 interaction and reinforcement of signals, the more educationally advantaged students will receive ample signals and incentives to prepare for postsecondary education. But the more educationally disadvantaged high school graduates will enroll at lower rates, require remediation, and experience lower postsecondary completion rates.

If the K-12 schools are left to carry the brunt of college knowledge and preparation signals, then more students will receive vague signals and fewer incentives for adequate preparation. For example, a Metropolitan Life Survey in 2000 of junior and senior high students found that 71 percent of the students expected to go on to a four-year college, but teachers expected only 32 percent of their students to attend a four-year school. Teachers believed that 28 percent of their students planned to work full time and 19 percent planned to attend a technical or vocational school. Teachers' estimates of secondary students' futures may be more realistic, because only 23 percent of adults have a four-year degree.¹⁰

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Metropolitan Life also surveyed 26,000 high school teachers in 12 southern states and found that only 38 percent believed that it was "very important" to "help all high school students master the essential content taught in college preparatory language arts, mathematics, and science courses." Teachers and secondary students also differ in the Metropolitan Life survey upon where students will find the most potential in the labor market. Students rank entertainment tops at 33 percent and high tech at 26 percent. Teachers believe that the areas of work that offer most potential for teens are high tech at 75 percent and health at 60 percent, and do not rank entertainment highly.¹¹

Despite the disconnects, there are signs of progress. Several states have begun to implement policies based on cooperation between K-12 and higher education. In Oklahoma, for instance, 8th-graders take ACT Explore and 10th graders take an ACT PLAN assessment that tests English, math, reading, and science reasoning. All Oklahoma students take the ACT in the 11th grade. Since this policy was implemented, Oklahoma reports more students taking college preparation courses, increased enrollment in postsecondary education, and lower remediation rates. In North Carolina, public high school students can earn college credits through a special initiative called "Learn and Earn Online." Qualified students in participating high schools can take various online college-credit courses at no cost to them or to their families. Students earn both high school and college credit for completed courses, and especially motivated students can finish an associate's degree or get two years of college under their belts before high school graduation.


In 2002, the California State University System eliminated its internal math

and English placement tests and, instead, will be using an expanded statewide high school California Standards Test for placement. This will provide secondary students with early indicators of their probable college placement at grade 11 before they reach a California State University. Finally, the Georgia Hope Scholarship Program is a simple but powerful signal that is reaching most secondary pupils who know that a B high school average will result in a guaranteed state scholarship. Even the critics concerned about inequities in Georgia Hope scholarship aid agree that the program's message is reaching many low-income families.

In one California program, K-12 and college teachers work on realignment of content and skills in high schools that enable success in college courses.

In other states, high school and college teachers are working together. Cal-PASS (the California Partnership for Achieving Student Success), for example, enables secondary and college teachers in a region to analyze first-year college student outcomes, including college remediation and inadequate college preparation. Then K-12 and college teachers work on realignment of content and skills in high schools that enable success in college courses. Finally, the two levels of teachers meet to align courses, assignments, and assessments.

The Educational Policy Improvement Center at the University of Oregon, in another example, constructs college reference courses, which are geared to the first-year college introductory courses in required subjects like math. A reference course consists of a teacher-submitted syllabus, assignments, tests, readings, and other resources, gathered by surveying teachers of first-year college introductory courses. High school students can use reference courses for information about college academic standards and placement levels. High school teachers can use reference courses to develop assignments that enable students to attain college preparedness. The University of Oregon provides exemplary college assignments and works samples for secondary schools, as well as a grade 12 seminar based upon a specific reference course.

College success for more students requires new relationships, practices, and signals that bridge the divide between K-12 and postsecondary education. These initiatives must penetrate deeply into instruction and classrooms through teacher participation. Better policy can help, but teachers working together across the levels must finish the job. 

ENDNOTES

- ¹ See Michael W. Kirst and Andrea Venezia (eds.). *From High School to College*.
- ² Using the 2001 Carnegie classifications, the 80 percent of students go to Community Colleges, Baccalaureate Colleges—General, Baccalaureate/Associates Colleges, Masters Colleges and Universities I and II. Some broad access schools are included in Doctoral/Research Universities, Intensive and Baccalaureate Colleges, Liberal Arts. See *Carnegie Foundations for the Advancement of Teaching, The Carnegie Classification of Institutions of Higher Education* (Menlo Park, CA 2001). I recalculated this broad access percent using the 2005 revised Carnegie classifications and came up with the same 80 percent estimate.
- ³ Michael Kirst, “Remediation: Who Needs It,” *Crosstalk* vol. 15, No. 1, Winter 2007, pp. 11-12. For College Completion statistics see Clifford Adelman, *The Toolbox Revisited* (Washington, DC; U.S. Department of Education, 2006), and American Council on Education, Access and Persistence, Washington D.C.; ACE, 2002.
- ⁴ Burton Clark (ed). *The School and the University*.
- ⁵ There are no recent assessments of the status of general education. Clifford Adelman, *The Toolbox Revisited*. (Washington, D.C.: U.S. Department of Education, 2006) analyzed college students’ transcripts from the National Longitudinal Study, data from the early to mid-1970s, which proved to be a low point in general education requirements. He reported that students took very few courses in the fields comprised by general education. Less than one-third of college credits were from courses that focused on cultural knowledge, including Western and non-Western culture, ethnic, or gender studies. Among bachelor degree recipients, 26 percent did not earn a single college credit in history, 40 percent did not study any English or American literature, and 58 percent had no coursework in foreign languages.
- ⁶ For a recent study see *Achieve, Using Admissions and Placement Tests to Assess College Readiness* (Achieve: Washington, D.C., 2007).
- ⁷ Adelman, *The Toolbox Revisited*, 2006.
- ⁸ Patrick Callan et. al. *Claiming Common Ground*. (San Jose, Ca: National Center for Public Policy and Higher Education, 2005).
- ⁹ For the powerful impact of extrinsic motivation for high school students, see Lawrence Steinberg, *Beyond the Classroom*. (New York: Simon and Schuster, 1996).
- ¹⁰ Metropolitan Life Survey of the American Teacher, 2000, “Are We Preparing Students for the 21st Century?” (New York: Metropolitan Life, September 2000).
- ¹¹ Ibid.

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