This paper examines the educational experience of students in their high school years and how this experience shapes their ability to be successful after high school. A study of research on high school students' educational experiences leads to the conclusion that the skills and knowledge needed by high school graduates who enter the workforce are the same as those needed by graduates who go directly to college. It is also evident that more collaboration is needed between high schools and colleges to produce a cohesive college preparatory curriculum. The evidence also suggests that virtually all students waste at least one year as they move from grades 11 through 13. Combining these assertions results in the development of a set of critical policy issues that must be addressed in order to create an education system that works for all students. These issues are: (1) high schools and colleges must collaborate to produce clear statements of where high school ends and college begins in each major field of study; (2) once high school graduation and college entrance standards are created, curricula that align with these standards must also be created; (3) middle school exit standards and curricula must be developed to mesh with high school standards; (4) students should develop a school completion plan before entering ninth grade; (5) students should be able to proceed at a pace appropriate to their achievement level; (6) to combat "senioritis," students should be offered education options that are appropriate to their level of attainment as soon as they have demonstrated the knowledge and skills necessary to graduate from high school; and (7) dual credit programs are a good interim way to meet the needs of a segment of high school students. (Contains 18 endnotes.) (SLD)
Bringing Secondary Education into the Information Age: Universal College Preparation

By James England

A Series of Essays Supported by the MetLife Foundation Change in Education Initiative

Preschool Through Postsecondary

June 2001
Everywhere the attempt of different branches and phases of the educational enterprise to solve their special problems in isolation are met by the stubborn fact of interlocking and interdependence. And this problem is insoluble till education is understood as a unified process.

— John Dewey, 1936

National Life and the economy are changing much faster than our schools. The nation faces a deeply troubling future unless we transform the lost opportunity of the senior year into an integral part of students' preparation for life, citizenship, work, and further education.

— National Commission on the High School Senior Year, 2001

While Advanced Placement courses are the fastest growing segment of high school curricula, the fastest growing segment of college curricula is remedial education.

— Kati Haycock, 2001

This paper examines the education experience of students in their high school years and how this experience shapes their ability to be successful after high school. The three major ideas asserted here include:

? The skills and knowledge needed by high school graduates who enter the workforce are the same as those needed by graduates who go directly to college.

? More collaboration is needed between high schools and colleges to produce a cohesive college-prep curriculum

? Virtually all students waste at least one year as they move from grades 11-13.

The paper concludes by combining these three assertions to produce a set of critical policy issues that must be addressed in order to create an education system that works for all students.

Implementing a College-Prep Curriculum

The role of the high school in American society has changed substantially during the past half century. In 1950, many people saw the high school diploma as a terminal degree enabling them to enter the workforce with the prospect of being able to raise a family, participate in the civic life of their community, and enjoy a financially secure future. Today, young people and their families know that successfully completing at least some college is a prerequisite for a secure future. In fact, two-thirds of high school graduates will begin college within 12 months of graduating from high school. Their aspirations simply reflect the reality that an information-driven economy requires entering employees to have the same levels of knowledge and skills as is expected of entering college students.

Since 1990, there have been a number of studies, commissions and workgroups that recognized the need for all high school graduates to be prepared to successfully enter college whether they go directly from high school into the workforce or into college. Taken together, these reports point to the need to prepare all high school graduates for success in college and a need for all students, parents and teachers to know what high school education is required for postsecondary success.

Most schools, however, have not adjusted their expectations or their curricula to meet these needs. In fact, the existence of high school curricula that prepare all students for success whether they go to college or directly into the workforce is so rare that there is no generally accepted name for them. In this paper, such a curriculum will be referred to as a "college-prep curriculum" since the needed curriculum is closest to the college-prep curriculum found in most high schools.

A major hurdle to implementing a college-prep curriculum is the current lack of cohesion between secondary and postsecondary institutions. High schools, two-year colleges, and four-year colleges and universities operate independent of each other in their own sectors with only a casual regard for the content of the other sectors' education. Colleges, for instance, often send confusing messages about what entering students need to know in
order to succeed. College admissions requirements vary from simply requiring graduation from high school to requiring high performance on tests of “ability” and high grades on college-level courses taken while in high school.

Although college admission requirements may be correlated with success in the freshman year, they are mostly unrelated to what students should study in high school in order to prepare for college. Furthermore, few colleges have been involved in setting state or local standards for high school graduation and, therefore, have little knowledge of the K-12 curricula. This often leads to unrealistic expectations of what accomplishments can be expected of the high school graduate.

Recent studies of 9th graders and their families show that only a few have the knowledge of what it means to graduate from high school prepared to succeed in college. In fact, such knowledge is mostly limited to students whose parents themselves graduated from college. Students whose parents have not graduated from college must rely on schools for information about college expectations. As documented in the National Center for Research Statistics’ The Condition of Education 2001, high school graduates whose parents did not go to college remain at a disadvantage with respect to postsecondary access and success. Among other findings, the report states that “first-generation” college students are less likely to obtain a college degree even after taking into account other factors, such as academic preparation, support from schools and family income.

The lack of a coherent education system coupled with a lack of clear information about what is required at each education level creates the need for students and their families to cobble together an education from a collection of disconnected and frequently unrelated parts. Since only a small percentage of students are able to figure out what education is required to meet their career goals, it is no wonder that many make bad decisions and fail along the way.

Inconsistent Expectations of Students

Many students at the end of 8th grade begin the journey to adulthood with the same goals: they want to become college graduates and work as professionals. Large majorities of high school students’ families see obtaining a college education as vital to their child’s chance for a successful future. In fact, such high aspirations for academic achievement cut across race and class lines in ways that are counter to the current rates of participation in higher education. By the high school senior year, over 70% of students still hope to obtain a college degree and over 90% expect to successfully complete at least some college. Even though most students enter and leave high school with high academic expectations, only less than one-third are able to achieve their goals by the time they reach adulthood. To understand why so many do not attain their goals, it is necessary to examine how students enter 9th grade and to follow their progress through high school.

Presently, many high schools operate as if college was an option for only a limited number of students. Students are frequently sorted into those who will attend college and those who will not. As a result, the education experience of high school students can vary greatly and too often this experience depends upon what teachers and counselors believe to be a student’s destination upon graduation.

In fact, the sorting of students starts during the middle school years. Only one-third of teachers believe that it is “very important” to prepare their middle school students for college-prep courses in high school. This belief is too often translated into low expectations for those students who are not viewed as college-bound material. Consequently, many students enter 9th grade unprepared for high school level courses, let alone a college-prep curriculum.

In 9th grade, the level of rigor in the courses to which students are assigned can exacerbate the lack of proper middle school preparation. The challenging courses that often make up the high school college-prep track are aimed at preparing students for success in college. In contrast, the less demanding courses that make up the “general” track are intended to prepare students to meet minimum high school graduation requirements. For the most part, such general track coursework leaves students unprepared for both college and the workplace.

“Senioritis” and Inconsistency in the High School Experience

To gain a clearer picture of the varied high school education experiences that currently exist, most students can be
divided into four groups: (1) college-prep students bound for selective college, (2) college-prep students bound for nonselective colleges, (3) students in the "general" track and (4) students who do not complete high school.

**College-Prep Students Bound for Selective Colleges**

Some students enter 9th grade with early academic preparation for a college-prep curriculum and hope to attend a selective college or university upon graduation. These students usually will end up taking many college-level courses during their years in high school. Since the academic contents of high school graduation requirements in most states are set at a 9th- or 10th-grade level, almost all of these students will complete the requirements for high school graduation by the end of the 11th grade. The academically strongest of this group will complete most of their high school graduation requirements by the end of 10th grade.

During their junior year, those students who aspire to attend the most selective colleges and universities — and who are fortunate enough to attend high schools with significant resources — will begin taking a substantial number of Advanced Placement or other "dual-credit" courses, which offer both high school and college credit. For the most part, these courses are taken to enhance the student’s admission profile and are not used to shorten the time it takes to obtain a college degree. These students often retake identical courses in college to boost their grade point average or apply the credits as electives.

In order to assure themselves of an academically talented freshman class, selective colleges and universities make many of their admissions decisions early in a student’s senior year, usually by December. Since such institutions rarely look at senior-year grades, students are, in effect, invited to drop challenging senior-year courses to take a "well-deserved" break from academic matters. This widely discussed phenomenon, called "senioritis," only recently has been viewed as a problem and not a reward for high achievement in high school.

**College-Prep Students Bound for Nonselective Colleges**

Students who enter a college-prep program in 9th or 10th grade but do not plan to attend a highly selective college will complete most requirements for high school graduation by the end of their junior year. By not taking challenging senior-year courses that will advance their knowledge or skills, however, these students often regress in terms of their preparation for college.

For example if, by the end of junior year, a student meets the three-year math requirement that many states establish for high school graduation, he or she often will not continue taking any math in the senior year. When entering college after not taking math for more than a year, these students are less likely to pass the college’s math placement exam and many are required instead to take remedial math. Senioritis — in this case resulting from the student’s mistaken belief that meeting the state requirement alone will adequately prepare them for college — therefore results in time wasted not only in high school, but at the college level as well.

Many students headed for nonselective colleges have the desire to shorten the length of time taken to earn a college degree by using the college portion of any dual-credit classes taken in high school. Such students, however, frequently have difficulty in receiving such credit and instead end up repeating the courses in college. In fact, for all students taking Advanced Placement courses, one third will not take the exams and a third of those who take the exams will not score high enough to warrant college credit.

Those who cannot or do not enroll in Advanced Placement courses often take locally sponsored dual-credit courses. These are courses that, if successfully passed while in high school, will be awarded credit by a local community college or four-year college in addition to receiving credit in high school. While this phenomenon is rapidly growing, it is fairly recent and has not been carefully evaluated. Many students report having trouble obtaining college credit unless they attend the institutions that originally granted the credit. Since credit for local courses is typically not awarded upon the basis of a score on a regionally or nationally recognized examination, the quality of the learning represented by the credit is frequently suspect. In addition, when credit is granted by a college, it may not count as a course required for graduation in the field in which the course is offered, but rather is simply counted as an "elective credit" which does not greatly help the student reach his goal of obtaining a degree.
Students in the "General" Track

High school juniors and seniors who are in the "general" or "vocational" tracks make up 45-50% of their classes. These students are generally not in a college-prep program, not taking or preparing to take dual-credit courses and are not included in some alternative program. Although many of these students will attend college, they are the ones most at risk for failure.

Part of the problem is that these students do not know what it takes to be successful after high school and do not see a need to get into a college-prep program. Decisions regarding college-prep-level courses made early in an academic career can leave an indelible print on a student's future. The National Commission on the High School Senior Year,11 which has also found that students graduating from the general track are unlikely to be prepared for the demands of the modern high-performance workplace, said it best:

"Every year, hundreds of thousands of ninth-graders make a decision that sorts them for years. They decide not to take Algebra I. This decision made at the age of 13 or 14 lowers their chances of attending college and raises their risk of forfeiting the future. Schools permit them to do this. Parents allow them to do it. They clearly do not understand the implications of this mundane, lightly made decision"  

Exacerbating the problem is the fact that students in the general track often are not given access to those courses necessary for success in college. As a result, these students usually do not have access to a school's strongest instructors because these teachers generally gravitate towards the more accelerated, dual-credit courses.

Students in the general track are just as likely as their college-prep colleagues to acquire senioritis. They take jobs and work a substantial number of hours per week after school (on average 15-20 hours per week) and spend considerable time socializing (another 20-25 hours per week), watching television (about 15 hours per week) or engaged in activities not connected to their schoolwork.12

Perhaps contributing to the lack of interest in school during the senior year is the fact that students in the general track often do not see themselves as important contributors to the school community. Instead, many of these students believe that the "important students in their schools were those who stood out either academically, on the sports field, or in music. Everyone else faded into a blur, probably not known well, if at all, by teachers, counselors, or other adults."13

The result of this lack of focus on school during the senior year is time wasted in college making up work that should have been accomplished during high school. While almost half of the students in a general track will attend college after high school graduation, such students frequently take one or more remedial courses and are not as likely to progress beyond their freshman year.14

Students Who Do Not Complete High School

The phrase "all students" also must include those who begin 9th grade but drop out before graduating from high school. In each year since 1995, about 4.5% of students in grades 10-12 have dropped out of high school. The number of dropouts varies greatly by race and family income. For Anglos, the annual dropout rate is about 3.3%; for African Americans, 5%; and for Latinos, it is almost 10%. In 1998, 12.5% of high-school-aged people from families with low incomes dropped out of school compared with only 2.7% of young people from families with high incomes.15 By age 25, 86.3% of all U.S. citizens have completed high school. Of this number, 10.4% do so through high school equivalency programs.16

What little is known about the education experiences of young people who have dropped out of high school or who attend school only sporadically must be inferred from programs that serve these students. Those programs that are most successful in getting dropouts to finish high school at a college-prep level of study incorporate the following characteristics: (1) integration of meaningful work experiences with academic work; (2) student choice combined with student responsibility; (3) an environment that fosters close relationships between teachers and students; and (4) interactions beyond the school often with other age groups.

While these characteristics have been shown to be successful with students who have dropped out of typical high schools, there is evidence that the above list also characterizes successful education for all students who are 16 to
This raises questions about the effectiveness of the “one-type-fits-all” approach that dominates high schools today.

Difficulties Faced by the Schools

Today, high schools face multiple sets of standards by which they and their students are judged. Frequently these standards conflict with each other. Almost all states now have state standards for promotion between grades and for graduation from high school. Currently, there are 12 states that incorporate these standards into assessments for promotion between grades. There are 24 states that have assessments that must be passed for high school graduation.

At the same time, there are local and state requirements for high school graduation that are stated in terms of required courses to be taken. These course requirements were in place long before the performance standards were introduced and for the most part have not been altered to match the standards. High schools, however, also know that they must offer substantial numbers of dual-credit or college level courses to insure that some percentage of their student body is admitted to selective colleges and universities.

Fifty years ago, when a small number of high schools first began offering college-level courses, only a very small percentage of students enrolled in such classes. This situation has changed dramatically. It is estimated that today almost one-half of high school juniors and seniors are enrolled in one or another type of dual-credit courses. There also is a push throughout the country to assure that some dual-credit courses — including Advanced Placement courses — are offered in every high school. This push has made dual-enrollment classes the fastest growing segment of the high school curriculum.

Providing sufficient courses to permit all students to meet the state and local graduation requirements while at the same time offering a substantial number of college-level courses puts a particular strain on most high schools. Only those high schools that have a large teaching corps relative to their student body size are able to assign strong teachers to the courses necessary to meet both missions. Left by themselves to meet these competing demands with limited resources, most high schools do only what they have always done: sort students into those who are believed headed to colleges and those who are not and then provide each group with its own set of courses. There is little opportunity for those who do not start out headed for college to make it into the college-prep track.

Critical Issues in Moving Toward a System To Serve All Students

As long as governance, funding and the policies affecting K-12 schools, two- and four-year colleges and universities remain unconnected to each other, there is little chance that the three sectors will cooperate to provide all students in grades 11-14 the education they need. New policies, funding formulas and possibly new structures that are designed with student education needs at the core are required.

The following list includes critical issues that need to be addressed during the coming three to five years if a state is to create an educational system that will serve all students. A later paper will discuss more completely these challenges and how they might be addressed.

1. High schools and colleges must collaborate to produce clear statements of where high school ends and college begins in each major field of study. These statements must become the standards for high school graduation and for college entrance, respectively. If achievement levels for high school graduation are not equal to the achievement levels required for entrance into college, the gaps need to be clearly articulated, and high school courses that will prepare students for successful entry into college must be offered to all high school students. While performance levels for college entrance may vary with the type of institution, higher education public institutions and all high schools have an obligation to align their standards and to publicly state their required performance levels at each institution. State policy leaders can create a statewide P-16 council composed of representatives of secondary and higher education, as well as representatives of the business community and assign this council the responsibility for articulating high school graduation standards that are aligned with the entrance requirements of public colleges and universities.

2. Once high school graduation and college entrance standards have been established, curricula that align with these standards must be created. All students should be expected to complete a “college-prep curriculum” in
high school. Discipline-based assessments for high school graduation should align with standards for college admission and course placement. State policy leaders should direct the state agency that is responsible for high schools to insure that each high school develops at least one curriculum that will permit students to meet these standards. This curriculum should be mandated as the default curriculum for all students.

3. Once high school curricula have been developed to support graduation standards, middle school exit standards and supporting curricula must be developed so that all students enter 9th grade prepared to succeed in a college-prep curriculum.

4. Before entering 9th grade, all students, with the help of high school teachers and counselors, should develop an individual plan of study to complete high school prepared for successful entry into college or into the workforce. To make this plan succeed, they also must decide how much time the student can be involved in extracurricular and nonschool activities and still succeed in their academic work. Students and parents need to review this plan with their high school counselors on a periodic basis. State policy should require all schools to maintain current copies of each student's individual plan of study in a format similar to the IPO for special education and gifted and talented students.

5. Students should be able to proceed at a pace appropriate to their achievement level in each field of study. Since students develop at different paces in different subjects, they should be able to take high school graduation assessments as soon as they are ready. Policymakers should explore the implications of implementing performance-based requirements for promotion between grades and graduation from high school. Performance-based requirements are derived from what students are expected to know and be able to do as contrasted to requirements based on courses that students must complete.

6. To combat "senioritis," as soon as students have demonstrated the skills and knowledge to graduate from high school, they must be offered education options that are appropriate for their current level of attainment and their aspirations for the future. Offering such options will help prevent a wasted year of education while students wait to transition from high school to college. (The development of a range of education options, and policies to implement those options, will be discussed by separate authors in two companion pieces that will become a part of this series of papers).

7. Dual-credit programs are an appropriate interim way to meet the needs of one segment of high school students. Creating a permanent structure to insure that all students graduate from high school prepared to succeed in college or in the workplace, however, will require new levels of cooperation between secondary and higher education. Two-year colleges and four-year colleges and universities must work with high schools to jointly develop programs to allow students who are ready for college-level work to do such work without draining the teaching resources that high schools require to meet the needs of all students.

Endnotes

1. Since the publication of A Nation at Risk in 1984, a number of national commissions have reported on elements of the failure to educate all students in this age group. A few of the comprehensive reports that have informed this paper are the American Youth Policy Forum (2000, August), High Schools of the Millennium: Report of the Workgroup, Washington, DC; The National Commission on the High School Senior Year (2001, January), The Lost Opportunity of Senior Year: Finding a Better Way, Washington, DC; and The National Education Commission on Time and Learning (1994), Prisoners of Time, Washington, DC.


5. For a comprehensive report on a study of 7,000 teenagers that details the lack of connection between the high ambitions of most teenagers and their plans for fulfilling such ambitions see, Barbara Schneider and David Stevenson (2000), The Ambitious Generation, Yale University Press, New Haven.

6. Digest of Educational Statistics (1999), Table 8.


10. Tech Prep represents one type of local dual-credit program that does not suffer from a lack of cooperation between secondary and postsecondary education. Tech Prep programs are developed from a planned sequence of study in a technical field beginning as early as 9th grade, but generally confined to the junior and senior years of high school extending through two years of postsecondary study. Nationally, these programs receive considerable support through the Perkins Act of 1990 and the School-to-Work Opportunities Act of 1994. They require articulation agreements between secondary and postsecondary institutions and include a common core of proficiency in math, science, communications and technology. The students can earn credit both in high school and in college. Tech Prep programs are strongly encouraged to develop in a manner that encourages transfer to four-year baccalaureate programs. To receive federal funding, these programs are also required to provide career and personal counseling to students participating in the programs as well as other preparatory services. While focused on education in preparation for technical careers, these programs incorporate all the elements of what is needed by students as they make their way from 9th grade into college. A more detailed discussion of tech prep and other dual-credit programs can be found in Clark, Richard W. (2001, January), Dual Credit: A Scan of Programs and Policies Related to High School Student Acquisition of College Credits, Seattle, WA: Institute for Educational Inquiry.


12. Id.

13. Id.


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The views expressed in this paper are solely those of the author and do not necessarily reflect the views of the Education Commission of the States.

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