chapter
ONE

Understanding the System

Preparing for college success is more complicated than it seems. Most parents of high school students (and most high school students and teachers) believe, or at least hope, that the college preparatory curriculum is carefully designed to ready students for success in higher education. Parents would likely be shocked to learn that the relationship between the high school instructional program and college success is imprecise at best. High schools are designed to get students to graduate, and in the case of college-bound students, to make them eligible for admission to college—generally the public university in that state. They are not necessarily designed to enable students to succeed in college.

This lack of a strong connection between secondary and postsecondary education in the United States comes as something of a surprise to many people because they assume that everyone in the education system at all levels must be talking with one another about something as basic and important as the knowledge and skills students require for success at the next level. They may assume, at the very least, that the government makes them do so.

Changing the Focus from College Admission to College Success

In practice, however, the two systems—K–12 and postsecondary—evolved in relative isolation. Although each is clearly engaged in education, each has traditionally seen its purposes and goals as distinctly different from the other's. This worked

reasonably well when the proportion of high school students who went on to college was relatively small, when few institutions were truly selective, and when a college degree was not the primary passport to economic success in our society as it is today.

All three of those circumstances have now changed. In surveys conducted by the Bridge Project and Public Agenda, upwards of 90 percent of ninth graders say they plan to attend college. The actual proportion of high school graduates who actually go directly from high school to some form of postsecondary education is closer to two-thirds, and this figure increases to above 75 percent when high school graduates are followed for five years. For the first time in human history, a society has large numbers of students continuing past high school.

The increase in high school graduates has led to greatly increased competition for admission to college, particularly at the most desirable institutions. This phenomenon began in earnest in the late 1970s and has not abated since. The most selective universities have witnessed the greatest increase in the number of applicants competing for a finite number of seats in the entering freshman class. The University of California, Berkeley, for example, now receives over thirty-five thousand applications annually, extends about eighty-five hundred offers of admission, and ends up with about thirty-eight hundred freshmen. Although it is not impossible for students to gain admission to even the most selective institutions, they must pay careful attention to the choices they make throughout high school.

The college degree has become much more important for entry into the labor force and continues to be the critical credential for access to graduate schools in the professions. As more high school students aspire to college and to higher career goals, they need to be prepared for college in ways that give them the skills to complete the baccalaureate degree in a timely fashion and successfully enough to enter the labor market or compete for scarce spaces in graduate school. To do this, they must attain high levels of academic competence, not just complete required courses.

Admission to certain schools, perhaps 5 percent of all colleges, has clearly become increasingly competitive. Requirements have grown more stringent as the number of applications has burgeoned. For students who want to be admitted to those schools, the quest to find the right combination of qualifications to entice the admissions offices has led to almost frenzied activity to demonstrate worthiness. This admissions "arms race" has caused schools, students, and parents to focus entirely

on getting into college, often at the expense of looking beyond admission to consider how successful the student will be once there. Student scores on SAT and AP tests, grade point average, class rank, letters of recommendation, and extracurricular activities have become the means to an end: admission.

But what happens after admission? What does the student face in that first college course? What do the faculty at a research university care about? What do they expect students to know and be able to do? Until now, these questions have seldom been asked and even less seldom been answered. Although colleges were willing to offer general platitudes about the "well-prepared" student, few ventured much beyond stating course requirements. Almost none were willing to specify what knowledge and skills students needed to master or develop to survive and prosper in their entry-level courses, although some talked about the importance of generic attributes, such as study skills and time management.

Much has been written about how to run the admissions gauntlet. A veritable cottage industry of books, courses, and private consultants has grown up around what should be a relatively straightforward activity: applying to college. This book is not designed to contribute to the volumes that already provide detailed advice on what it takes to crack Fort Knox and get admitted to America's elite universities. It is not about how to do the right things to get admitted to college but rather about how to do things right in high school so that graduates are prepared to succeed after being admitted. As students spend four years preparing for college, how can they direct their energies to doing things that will not only help them in the admissions process but also equip them to do well academically once they are accepted? Given the time, energy, and ever-increasing dollars that must be devoted to a college education, the time has come to think past admission to academic success.

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This book will help those who teach, guide, assist, and support students preparing for college to know what should be occurring in high school to maximize student college success. At the core of this book is a relatively detailed set of specifications describing what students should know and be able to do to succeed in college. The Knowledge and Skills for University Success (KSUS) standards were developed during a three-year study conducted under the sponsorship of The Pew Charitable Trusts and the Association of American Universities, a national organization composed of sixty of the nation's leading research universities. Its membership list is a who's who

of selective universities, twenty-eight of which sponsored or endorsed the standards presented here. The findings were sent to every public high school in the nation in April 2003 in a report entitled *Understanding University Success.* What these standards enable parents, students, and teachers to do is to compare what is occurring in high school classes with what will be expected in university classes.

The book presents four distinct types of information: description of the content knowledge that is important to master; explanation of the broader cognitive skills and "habits of mind" that may be even more important in college than content knowledge; examples of college general education programs, requirements, and student course schedules that were culled from a range of colleges and universities; and finally, documents from real-life university classes, including examples of student work, course outlines, assignments, reading lists, and grading criteria. Subsequent chapters also examine the ways in which the high school experience can be organized to achieve the goal of an intellectually coherent curriculum tied to college success.

It is worth stating explicitly that this book is not intended as a criticism of high school teachers and what they are doing currently to prepare students for college success. In fact, it is likely that many teachers are already doing much of what this book identifies as effective practice. If they were not doing so, no student would arrive in college today with the ability to cope with the demands of introductory courses. As it is, many students make a smooth transition from high school to college, and this is in part due to the efforts of dedicated teachers at high schools who have done their best to offer a challenging education that is well aligned with college admission and success. The book is about the larger system of high school–college articulation and how the high school program of study can better prepare more students for college success.

How High Schools Decipher the College Code Today

Even in schools that succeed in getting large numbers of students admitted to college, a certain amount of doubt exists about what is really needed for college success. And indeed, these schools should have some doubts. The students from the best high schools often go on to the most selective universities, where all the skills discussed in this book are in the greatest demand. These students have the least margin for error when it comes to preparing for college success.

Teachers at these schools decide how to gear their curriculum for college success based on a variety of mechanisms. Of course, they went to college themselves, often to the same selective institutions. They maintain contact with graduates who return to describe the ways in which they were well prepared and areas that could be improved. They may teach Advanced Placement or International Baccalaureate courses specifically designed to connect with postsecondary education's expectations for knowledge in a particular subject. They may even score tests for one of these organizations, and in the process, talk directly with college faculty about their expectations.

These are the lucky ones, the ones who have deciphered the code most clearly. But even these teachers often rely on their instincts when deciding exactly what knowledge and skills to develop in their students, how to structure a course, how to grade student work, and which topics to emphasize. More to the point, precious few schools are composed entirely of teachers with this level of knowledge and sophistication, so the coordination between grade levels or across classes in, say, the school's English department becomes a "best guess" about how to sequence and develop the skills necessary to do well in college. Add to the mix that most high schools now have more than one college-bound track, and providing a program that equips all students to handle entry-level college courses becomes impossibly complex.

In practice, large high schools may end up having one college-prep track that fulfills the requirements of the state university and a second, *real* college-prep track that is designed for students headed to more selective institutions. Perhaps there is nothing inherently wrong with this arrangement, except that many students and parents do not understand the nature of the two-track system and the implications of one or the other.

"Many students and parents do not understand the nature of the two-track system."

Even when individual teachers do a good job covering content or developing skills for college success, rarely does the high school's instructional program over four years provide an intellectually coherent experience that cultivates the habits of mind that may be even more important than specific content knowledge. Without a well-designed academic program and curriculum that progresses from ninth through twelfth grade, both in the content covered and the intellectual skills developed, relatively few

students will integrate what they learn in high school—find the whole to be greater than the sum of the parts. Many will enter college with pockets of knowledge and skill and then experience difficulty with a curriculum that assumes they already know certain things and can undertake complex cognitive tasks.

The lack of an intellectually coherent program of instruction affects the overall quality and efficiency of preparation. When the English 9 course does not enable students to master what is necessary for English 10, for example, then English 10 may end up being in large measure a repeat of English 9. The net result may be students reworking similar material for two years, and then all of a sudden in their junior year being thrust into a more demanding course. If the challenge level and pacing are not consistent from year to year, then students are not prepared when they reach Advanced Placement courses, for example, where content coverage and mastery is dictated by an external exam. They may avoid AP altogether or struggle mightily adapting to work expectations that are more collegelike in nature.

If the high school–college connection leaves something to be desired at even the best high schools, what is the situation in average schools or those that send few students on to college? These schools have a very difficult time maintaining the level of academic challenge necessary to prepare their students for the rigors of college courses, at least in part because the culture supporting academic achievement is not as well developed in them or as systematically nurtured; in addition, there is little knowledge of what is required for success and it is not widely publicized.

It is difficult for the average high school with little direct information on college practices and expectations to make all the right choices about how best to structure their college preparatory curriculum and ensure an appropriate challenge level in that curriculum. For these schools, which constitute the majority of high schools, the content and challenge level of their college preparatory courses vary considerably. As a result, their graduates vary in the degree to which they are prepared for the demands of college classes.

In Part Two we will examine the nature of the college course of study and its strengths and weaknesses. For now, it is worth noting that high schools have little choice other than to accept the current structure and content of entry-level college courses as a fact of life. Perhaps colleges should change their pedagogy and

expectations to match the realities of high schools, but that is not likely to happen anytime soon. It makes more sense for high schools to understand how college courses operate and gear their student preparation accordingly.

Rethinking the Purpose of High School

Many people make the legitimate argument that the purpose of high school is not simply to prepare students for college, that the high school education has inherent value, and that in any event not all students go on to college. This is a powerful argument. This book is not intended to devalue aspects of the high school curriculum that do not directly prepare students for postsecondary education. Instead, it adopts an inclusive perspective by encompassing all forms of postsecondary education. From this perspective, nearly every aspect of the high school curriculum could conceivably be geared to help students prepare for success after high school.

The point of view presented here is simply that if college preparation is one of the purposes of high school, then it should be done as well as possible so that all students who wish to attend college can do so. Given that close to 90 percent of incoming high school freshmen state that their goal is to go to college (although many may not behave that way during high school), the high school program of college preparation should draw on all available information to align itself better with postsecondary success for those students who do ultimately choose to pursue it. Perhaps the key focus in all classes should be life after high school.

> "Close to 90 percent of incoming high school freshmen state that their goal is to go to college."

More and more students and parents are interested in the degree to which a high school program of instruction is oriented toward college admission, and increasingly, college success. All high schools will be forced to cope with the growing expectation that what they are doing is preparing all their students for college success. Many high schools will find themselves lacking the information, the point of reference, to evaluate how well they are doing this. This book is designed to serve as a guidepost and a frame of reference that teachers and administrators in particular can rely upon while strengthening the connections between high school and college in ways that help more students succeed in college.

Through the Students' Eyes

Throughout this book we will periodically view college preparation, transition, and undergraduate general education from the student perspective to help illustrate how the issues we are discussing actually play out in the lives of young people. We will follow the journeys of three hypothetical students, each a composite of characteristics associated with groups of students who achieve varying degrees of college success. To illustrate the variation that occurs even in a single institution, we assume that all three students attend the same high school.

That school is Westside High, a large comprehensive high school that enrolls nearly sixteen hundred students and is located in a transitional neighborhood in the inner suburban ring of a midsize American city. It has a strong tradition of preparing students for college, and its students have been regularly accepted at some of the more selective universities in the nation. Each year Westside sends a significant number of students to the state's top two public universities and the local community college. Approximately two-thirds of its graduates go on immediately to some form of postsecondary education, with many more attending within several years of graduation.

The composition of the student body at Westside has been changing over the past ten years as the community has become more diverse ethnically and economically. Historically, the community has been home to a largely middle-class group of residents, many of whom worked downtown in professional roles. Many of these families raised their children in the neighborhood and have strong social networks. New arrivals in the community include recent immigrants to the United States as well as families moving in from other states and members of racial minority groups who have relocated from the inner city. The children in these recently arrived families are almost always the first generation to aspire to college, and their parents generally support these aspirations, although they are limited in their knowledge of how to help their children. They depend on the high school to inform them and to ensure their children are being properly prepared for postsecondary education.

Let us begin by acquainting ourselves with our three students as they prepare to enter ninth grade at Westside.

Alicia

Alicia is typical of the students whose families are new to the community. She has a vague idea that she will go to college and is interested in entering the medical profession in some way, but she knows little about what is actually required to achieve these goals. As a freshman, she has one brief meeting with a counselor and participates in a group advising session in which she completes a proposed program of study for her four years of high school. She makes sure she has all the classes she needs to meet local graduation requirements. She is also careful to save space in her schedule for some classes that look like "fun," and to take some business classes, in case she needs to work over the summer or while in college.

As a ninth grader, she is placed into Algebra I based on her middle school math grades. She also takes regular ninth-grade English, geography, a business class, Spanish I, and art. She cannot get into biology because of schedule conflicts, and ends up with a double lunch period. She knows she could be taking a more challenging math class, but she also kind of likes being able to get most of her homework done during the school day.

Derrick

Derrick is in many ways what people would describe as a typical high school student. He is at least as interested in sports as in academics. His parents moved to the community from the city about ten years ago, primarily for the schools, and Derrick attended elementary and middle school in the district. He has an older brother and sister, each of whom graduated from Westside and went on to college. His brother went to the local community college, where he obtained a certificate in computer-assisted drafting, and he now works for a local engineering firm. His sister is attending a four-year college in the metropolitan area where she is in her sixth year and nearing completion of a degree in political science with hopes of becoming a high school social studies teacher. Her time in college was extended because she had to take remedial courses as a freshman and had particular difficulty with the college writing requirement, although she is now an accomplished writer. She feels that she learned about college readiness "the hard way."

Derrick wants to attend college on an athletic scholarship. Like Alicia, he sets up his schedule largely as he has been advised to do by his counselor during a group advising session. His parents review his schedule and compare it to the courses taken by their other two children. Derrick's goal is to take the minimum necessary to get into college. Also like Alicia, he takes core academic courses, although he begins with a geometry course in addition to freshman English, geography, Spanish, and biology. For electives, he takes tech ed and a computer class. He is hoping to participate in the school's athletic trainer program, which is offered in conjunction with the local community college and lets students serve internships as athletic trainers. He also plans to play three sports this year, which will limit the amount of time he has available for homework.

Teresa

Teresa, our final student, has a laser-sharp focus on her future. She knows she wants to become an aerospace engineer, and perhaps work for NASA some day. She has demonstrated keen analytic abilities all her life and has already participated in a summer camp where she learned about the space program. She knows she wants to attend an out-of-state university, one that will prepare her well for the graduate education she believes she will need to achieve her professional goals. Teresa also has parents who fully support her in this vision. Both are college-educated and work in professional fields. Her mother also arranges her work schedule to allow her to volunteer a half-day a week in the high school's career center, where she helps students prepare to make the transition out of high school. In the process, Teresa's mother has learned a great deal about the college admissions process.

Teresa's schedule looks different from that of the other two students. She begins her mathematics with Algebra II, having been accelerated in her middle school mathematics studies. She is a student in the high school's International Baccalaureate school-within-a-school program. This program shapes her schedule significantly and reduces her options and choices. She has only one elective, and she uses it to continue orchestra, which is offered at a time that allows the many IB students with musical backgrounds and

training to participate. She is in Spanish III, having taken two years of Spanish in middle school. The International Baccalaurate curriculum determines the rest of her schedule, which consists of these courses: Global Geography, Global Literature, Cultural Aesthetics, and Global History.

Teresa has set her sights on membership in National Honor Society as well as the full IB diploma and has already researched the community service requirements of both. Through her parents, she makes contact with a local firm with a specialty in optics and a subcontract from NASA, and she inquires about an internship with this company. Last summer she participated in a creative writing workshop where she received instruction from a well-known short story writer. She plans to enroll next summer in another Space Camp, in Alabama, where she will learn more about NASA and the space program.

Each of these students starts high school with the same hypothetical opportunity to prepare for college, yet an observer can already perceive differences in how successful each will be. Unfortunately, the choices they make and those the school makes for them over the next four years will further affect their preparation. We will check back with these students in the next chapter to follow their progress.

Increasing College Success: What We Can Do

Each chapter in Part One of the volume concludes by raising issues and asking questions related to the topics it has discussed. These discussion points also suggest ways for educators and others to begin to make the kinds of changes that will lead to college success for more of their students. Some of the suggestions are quite broad, others specific. The intent is not to offer a detailed, one-size-fits-all action plan. Although an action plan will be necessary, it will have to be adapted to the context of each school.

The brief suggestions are meant to stimulate further thought about the current situation and the assumptions present in a school or school system. The suggestions can serve as tools to gauge the degree to which alignment may be an issue locally. Based on such an analysis, a school staff, in partnership with central administration of the district, might decide to delve more deeply into the alignment issues raised by these questions.

Questions

- To what degree is the high school's program of instruction consciously designed to achieve some specified set of aims versus being the accumulation of historical precedent, tradition, and teacher and community preferences?
- How is the school's program aligned with its purposes?
- Are the purposes conveyed to students and parents?

Actions

Members of the school community can ask these questions to examine the fundamental purposes of the high school education. This can lead them to reconsider the courses offered, their purposes and goals, and the school's culture. The ultimate goal is to be able to articulate clearly and concisely what the high school stands for and what it commits itself to accomplish for all students, and particularly the role of college readiness in the school's program of instruction.

Questions

- How does the emphasis on meeting college admission requirements support or inhibit an emphasis on readiness for college success?
- Who determines which skills are taught in which classes?
- How stable are these skills over multiple sections of courses with the same name?
- How dependent is the instruction in these skills on a particular teacher, and how much do the knowledge and skills taught in the same class change when one teacher leaves and a new one arrives?

Actions

These questions need to be asked because college prep courses can, over time, come to lose their connection with their ultimate goal: college success. To respond to these questions, a more introspective examination of the content of courses is needed, both individually and cumulatively, to determine how they really prepare students to succeed in college. It may be that the courses do have the potential to prepare students adequately, but no one has ever asked the right questions or developed an adequate means to determine which of them prepare for college

success rather than just admission. The method most likely to be employed here is content analysis of course syllabi. This method will be discussed later in more detail. At this point, it is most important to consider the purposes for, content of, and variance present in college preparation courses.

Questions

- How are expectations different for different groups of students?
- In what ways do the expectations of all students progress over the four years of high school so that they better approximate college expectations by the end of senior year?

Actions

To understand better the ways in which the high school is challenging different students, student schedules, disaggregated by type of student, must be analyzed. The school should pay special attention to the schedules of students in poverty and those from groups traditionally underrepresented in college. The analysis should note whether students are taking a full load of classes all four years, how many math, science, and social science courses they take, and the number of advanced courses in which they are enrolled. If these students are dramatically underrepresented in key college prep courses, this is strong evidence that the proportion of them going on to postsecondary education from the high school is unlikely to increase in the foreseeable future.

High schools need to examine the college preparation program over all four years to determine its coherence, the connections between classes, the types of cognitive skills developed systematically, and the cultivation of the habits of mind that will enable students not only to succeed academically in college but to get the most out of the experience. These issues too will be addressed in greater detail later. Suffice it to say now that, for a school conducting a general inventory of its goals and program of instruction, these issues are worth considering in general terms during this initial review and then in greater detail as changes are made to the curriculum.