policy perspectives

What We Must Do To Create a System That

Prepares Students for College Success

By David T. Conley

An ever-increasing proportion of high school students in the United States today aspire to graduate from college. Yet statistics indicate that the percentage of college students receiving bachelor's degrees has remained relatively constant over the past 25 years, that it now takes on average 6 years to get a four-year college degree, and that somewhere between 30 percent and 60 percent of students now require remedial education upon entry to college, depending on the type of instruction they attend. Also, over the past 25 years, SAT and ACT scores have risen only slightly in math and have been relatively constant in reading, high school grade point average has gradually risen, and the proportion of students taking college preparatory courses has grown as well. Given these statistics, what must be done to create a more aligned educational system that prepares students for college success? This paper tells you how.

Why We Must Create a System That Is Better Aligned

This paper provides secondary and postsecondary educators with a more complete picture of how their efforts at improved alignment may be supported by emerging policy trends, or even eventually compelled by them. This broader perspective can also help educators, administrators, school board members, and others understand why they should be motivated to undertake change in a system that may appear to many to be functioning more or less without significant problems.

Increasing Government Incursion and Regulation

At the heart of this kind of change is a fundamental restructuring of power in and

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THIS POLICY PERSPECTIVES PAPER PROVIDES SECONDARY AND POSTSECONDARY EDUCATORS WITH A MORE COMPLETE PICTURE OF HOW THEIR EFFORTS AT IMPROVED ALIGNMENT MAY BE SUPPORTED BY EMERGING POLICY TRENDS, OR EVEN EVENTUALLY COMPELLED BY THEM.

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control over education, from kindergarten through college. Several forces are at work here: State and federal control is increasing while local control is decreasing, the link between education and economic success is tightening, and there is a general sense that a college education should become as universal in the twenty-first century as a high school education was in the twentieth.

As education policy falls increasingly under state and federal control, local school districts no longer call the shots to the degree to which they have been accustomed. Similarly, postsecondary institutions find themselves subject to greater government intervention in their operations. Although policies designed to align secondary and postsecondary education have by no means reached tidal wave proportions, they are more prevalent now than they were 20, 10, or even 5 years ago. Employers, too, are increasingly reaching the conclusion that their future will require workers who are not merely competent high school graduates but knowledgeable and skillful in ways best achieved through a college education. The baccalaureate degree remains one of the greatest value-added attributes of a person entering the labor force. The final force, the desire for universal postsecondary participation, is driven by students and parents facing the increasing complexity of life in the information age. The baseline level of education expected of the populace is moving toward the baccalaureate degree. As long as large numbers of parents and students expect a close relationship between high school and college, politicians will be motivated to move policy in that direction. For these reasons and others, high schools and colleges are likely to have to strengthen their connection over the coming decade.

Expanding High School Standards and Exams

State adoption of academic content standards laid the groundwork for high school assessments of student knowledge and skills. By 2004, 19 states had implemented high school graduation examinations and 6 others had plans to do so. In addition, the federal No Child Left Behind Act requires all states to adopt statewide tests in English, math, and science to be administered in the 10th, 11th, or 12th grade. The net effect is that all states either have or will soon have high school exams linked to academic standards that all students take before graduating from high school.

This assessment structure creates the potential for closer connections between high school and college, but only if the exams are aligned with college success standards. Research conducted by Standards for Success, published in the 2003 report, *Mixed Messages,*[1] found that most state standards-based high school tests were not well-aligned with postsecondary learning. The effect of poor alignment is that as high schools prepare students to pass state tests, they are not considering how they are preparing students for college success. As a result, high schools may find themselves organizing into two tracks: one for students preparing for the state exam and another for students preparing for college. States eventually will have to come to grips with this divide and develop second-generation assessment systems in which they seek to connect their tests to outcomes beyond high school.

Changing Admissions Tests and Processes

The college admissions process is undergoing a metamorphosis; the public gets periodic glimpses of it, but much remains hidden. At the heart of this metamorphosis is the use of increasingly more complex information on a range of student characteristics and additional measures of student knowledge and skill. This is driven by intense competition for admission to the most prestigious institutions and by demand for lower remediation rates, higher graduation rates, and less time to degree completion at public postsecondary institutions.

Admissions testing is shifting from aptitude-based models, which seek to identify those students who have what has been considered the native ability or intelligence to do college-level work, to achievement-oriented tools, which seek to measure knowledge and skill in greater detail. The increase in the number of students taking AP tests is only one indication of this phenomenon. The rise in the use of SAT II subject area tests by universities is another indication of this trend. Even the two largest admissions tests, the SAT and ACT, are emphasizing their connection to state content standards and the high school curriculum, and distancing themselves from previous characterizations as measures of student aptitude.

The SAT in particular is in the process of transforming itself so that it better reflects student content knowledge. The test makers went so far as to remove the word "aptitude" from the test's name in the early 1990s. The test now labels the section previously entitled "Verbal" as "Critical Reading" and has added a new section entitled "Writing" that requires those who take the test to write in response to a prompt. The new reading test eliminates analogies and adds short reading passages on which student knowledge of grammar and usage is tested. The purpose is to send the message to students preparing for college that being able to read and write well is more important than being able to identify sometimes obscure relationships between word pairs.

The old quantitative section is now aptly renamed "Mathematics." The math content tested now extends to what the College Board, the maker of the test, describes as "third-year college preparatory math," which, in practice, corresponds roughly to Algebra II. To make room for this additional content, quantitative comparison questions are eliminated. In all cases, the changes emphasize content knowledge and higher-order thinking specific to college success at the expense of items that sought to measure the more abstract notion of aptitude to do college work.

Plans are also in the works for those who take the SAT to be given a diagnostic profile that tells them where they stand in college readiness based on their responses to test questions. Instead of simply getting a score report with a number such as 950 or 1100, they will receive a statement that outlines the areas where they may wish to improve while still in high school in order to increase their college readiness, not just their SAT score. The diagnostic profile concept is a powerful addition to a test notable for generating a number that many remember for the rest of their lives, but that motivates few to do anything different academically.

Even if their score on subsequent SAT tests does not improve dramatically, or if they do not need to retake the test but simply use the information to strengthen their knowledge and skill foundation, they may be more likely to succeed in postsecondary education as a result of their response to the profile.

The reference point for this feedback is the College Board Standards for College Success. Here, again, is an example of how the culture of admissions testing is changing. The College Board has adopted its own set of content standards defining what students need to know and be able to do to succeed in college. The College Board Standards for College Success in math and English span middle school through high school, offering a more integrated road map to college readiness. The committees that convened to develop these standards in reading, writing, mathematics, and science reviewed a range of nationally recognized standards documents in relevant content areas. The development of these standards was complex, but the Association of American Universities-sponsored Knowledge and Skills for University Success standards (http://ceprnet.uoregon.edu/cepr.uus.php) were a key resource to ensure that the College Board standards connected with college success.

Availability of Integrated Data Systems

State governments are increasingly viewing education as a continuum from preschool to postsecondary education. The focus is less on each separate entity and more on the movement of students through a unified system. To understand the system as a whole, information on student performance must be transferred seamlessly across institutional boundaries.

The evolution of such large-scale data systems is proceeding rapidly as computer hardware and software become more sophisticated and the Internet matures as the system for inputting and reporting data. The result will be a much tighter connection among elementary, secondary, and postsecondary learning, and a drive to standardize reporting on student knowledge and skill. These data systems will not only allow for continuity in reporting but also store and manage much more complex performance data than paper transcripts have allowed.

Lawmakers are encouraging the evolution of these systems because they desire greater educational accountability and efficiency. In an era of limited resources and soaring tuition costs, pressure is growing to increase the success of students admitted to college and educate them as quickly as possible, without need for remediation or reteaching of content that students have already been taught once. Each segment of the educational system increasingly will be judged based on how well it prepares students for the next step in their education or their transition to life beyond school.

For schools, the implications of this coming revolution are significant. Traditional grading systems will be subject to greater scrutiny as technology enables comparisons between schools and even individual teachers. More data on the relationship between high school preparation and college success will allow an increase in research on this all-important set of practices. In general, academic content standards will start to become more consistent across states. Definitions of mathematical proficiency and adequate writing, for example, will become more universal. Internet-based systems will permit more widespread use of exemplars and student work samples along with grades.

To achieve this goal, all students will have to be given a common identifier they retain throughout their education so that all their relevant data can move with them. A number of states have already adopted such systems and have instituted procedures that allow information to be entered once, then used for multiple purposes by different systems. The privacy issues here are complex, and at the moment, a greater impediment than the technical challenges.

These connections will be particularly important if states articulate and coordinate their high school assessment systems with postsecondary learning standards. The potential to reduce remediation will be enhanced if data from high school tests can be used by postsecondary institutions for placement and also by high schools for instruction.

Desire to Create a K–16 Educational System

The idea of a K–16 or even P–16 educational system has intrigued policymakers for some time, although educators have been less enthusiastic about it. However, the policymakers seem to be winning as they increasingly blur the line between secondary and postsecondary systems through a range of programs designed to allow students to move from high school to college when they are ready, and not necessarily when they complete a prescribed course of study.

As a result of these kinds of changes, expectations for student learning are likely to become increasingly aligned across institutional levels in the educational system. Although this offers some real advantages to students, it can wreak havoc with curricula that have not been calibrated to connect. American education is not only fragmented between secondary and postsecondary systems but also internally among elementary, middle, and high school programs of instruction and across two-year colleges, four-year colleges, and universities.

At the state and even the national level, there is irresistible pressure on school systems to align the content knowledge and cognitive skills students attain and demonstrate as a result of participation in the public schools. Because results from state

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assessments are reported publicly to an ever-increasing degree and because federal requirements have upped the ante for many schools, real efforts are being made to ensure that the same material is no longer taught twice while some material is not taught at all. More attention is being paid to student readiness to learn at all levels and to providing additional opportunities for students to master material they failed to learn the first time it was presented to them.

In the final analysis, all of this activity will lead to an environment in which teaching and learning are more systematic, more purposive, and more focused. The challenge for many schools will be to incorporate the college preparatory curriculum into this process. Because the college prep curriculum has been defined in terms of course titles, alignment has been assumed to exist if titles are sequenced properly.

As states begin to align their high school content standards with university entrance requirements and entry-level course expectations, the old model of the high school college prep curriculum will no longer suffice. Getting a "B" in algebra will not be enough if key content has not been mastered. Passing junior-year English may meet the course requirement for college admission, but if students cannot write well as a result of the course they will be no better off in their ability to undertake postsecondary studies than they were before they took it.

A well-aligned curriculum should help decrease college remediation rates, which are particularly high in two-year and open-enrollment institutions where all applicants are admitted but many lack the skills necessary to enter the course sequence at a college level and must begin by relearning high school material. These courses generally do not bear college credit, and studies by the U.S. Department of Education's National Center on Education Statistics show that students who begin college by taking remedial courses are less than half as likely to graduate within six years as their colleagues who do not. Clearly, states have a vested interest in decreasing the number of students who must be taught the high school curriculum when they are in college. Doing so is costly and inefficient, in part because these students are occupying seats in the postsecondary system and thus preventing other students from attending college.

The complete implications for high schools of a fully aligned K–16 system are not entirely clear at this point, because much depends on exactly how states put such a system into place. However, it seems reasonable to conclude that at the least students will be entering and leaving high school on a more continuous basis than they do under the current cohort-based model. As middle school students become ready for high school instruction, it will need to be provided to them. And perhaps more importantly, as high school students become ready for college instruction, they, too, will be able to move on.

The tool for determining when students are ready to move on will be academic content standards and measures of how well students have mastered specific standards. The Knowledge and Skills for University Success (KSUS) standards will be a useful tool here. These standards specify knowledge, skills, and cognitive challenges, so they clarify what students need to do. When accompanied by student work samples, the standards illustrate in even greater detail what college-level work looks like and how it is different from high school work. This helps faculty and students in each institution design learning experiences appropriate to the students' assumed level of intellectual development.

The key policies that will need to change are in the areas of high school graduation and college admission requirements, both the courses and the tests that students take.

Because they are designed to bridge the gap between high school and college, KSUS standards can become a yardstick of student readiness for college-level work in an aligned system. When students are ready to learn at the level described in the KSUS standards, they should either start taking college courses or participate in learning experiences at that level on the high school campus. High school teachers rarely want to lose the students who are ready to do college work, but it should not be acceptable to hold onto them simply because they are labeled juniors or seniors. Many states already provide postsecondary options, but with little guidance on when a student is ready to participate in a college-level course other than the student having completed the high school course sequence in a subject area. Based on the KSUS or a state-mandated set of articulated high school–college standards, it will be possible to make better decisions and offer more closely connected programs that enable students to make successful transitions from high school to college.

Creating a System Where More Students Are Prepared for College Success

What are some of the specific things that need to occur to connect high school preparation and college success more directly? The changes will need to take place at several levels in the educational system, and will require the involvement of many different constituencies.

What Policymakers Can Do

In all likelihood, policymakers will continue to provide the primary impetus to move education toward an aligned K–16 system. Although there has been a great deal of educational reform already at the K–12 level, few reforms have specifically been designed to strengthen the connection between high school and college. Some activities, such as postsecondary options and dual enrollment programs, have created more opportunities for students, but these programs often work only for certain students under specific circumstances. They do not address broader issues of high school–college articulation for all.

Policymakers need to contemplate bold steps that break down the barriers between high school and college. Such policies are likely to displease many in those institutions because each will perceive that it is losing power and control over particular aspects of its programs. This perception may not be entirely inaccurate.

The key policies that will need to change are in the areas of high school graduation and college admission requirements, both the courses and the tests that students take. Two dozen states either require or will soon require students to pass some form of test in order to graduate. None of these tests was designed to connect in any systematic fashion with postsecondary readiness. The first step states can take is to redesign high school graduation tests so that, at the very least, they provide diagnostic information to students on their college readiness. Because the tests are often given in the tenth grade, they are not likely to be very useful as admissions measures, but they can alert students to their readiness for college and to the knowledge and skills they

should be working to develop during their remaining time in high school.

Similarly, state policymakers should be prepared to revise or augment their state assessment systems to measure more complex cognitive skills. One way to do this is to add a requirement for classroom-based assessment of student work samples. Term papers, research projects, and other learning products that are representative of higher-order cognitive functioning can be assessed against college success standards.

Finally, policymakers can encourage high schools to emphasize intellectual coherence by identifying the characteristics of a high school graduate and stating these in terms related to postsecondary success standards. High schools could be required, at the least, to describe how their curriculum is sequenced in a fashion that develops the habits of mind so crucial to college success and lifelong learning.[2] State policymakers could encourage pilot projects to develop seminar-like courses for seniors. This work could be further facilitated by mandating that high school and postsecondary faculty meet to agree on the exit and entry knowledge and skills students should have mastered.

Higher education institutions would also benefit from state policy guidance designed to enhance articulation with high schools. Although institutions would retain control over whom they admitted, admissions decisions would have to be made largely on the applicants' demonstrated mastery of the knowledge and skills deemed critical to college success. The Knowledge and Skills for University Success standards offer one model, but others have been developed or could be created specifically for a state. With these standards in hand, colleges and universities could articulate different standards of necessary content mastery to distinguish which students should apply to which institutions. This approach could help to reduce remediation levels sharply and to ensure that entry-level courses would no longer reteach large amounts of the high school curriculum.

Finally, states can change the placement testing system. Once campuses agree on the knowledge and skills required to be admitted to each of them, a common placement test could be administered statewide. High schools would then be in a better position to help students anticipate the contents and demands of this test as well.

What High School Educators Can Do

Most American high schools are complex cultures committed to continuing in roughly the same fashion as they always have. Schools that are organized into distinct subject-based units or departments that offer roughly the same courses taught in largely the same way year after year, that distinguish curricula between the college-bound and non-college-bound, and that tend to group students by perceived measures of ability are difficult to change so that they focus on student mastery of key knowledge and skills.

The key strategy in an articulated system is to clarify what it takes for students to be ready to move on to college. High schools that embrace this goal will need to make big changes. They will become learning environments in which students are constantly measuring their performance and progress against clear outcomes and standards in order to gauge where they are lacking and where they have succeeded. They will emphasize portfolios of student work, teacher-led student critiques of college readiness, challenging projects and assignments that require students to develop the habits of mind associated with postsecondary success, and an overall intellectual coherence that leads to progressively greater challenges and learner responsibilities to achieve desired performance levels.

Such schools will require strong connections between students and teachers. These schools will function as communities of learners where expectations are clear and high. Students will have to be actively engaged in their learning and pursue the goal of equipping themselves with the necessary tools for college success rather than merely checking required courses off a list.

This may sound idealistic, and to some degree it probably is, but it is not impossible. Some schools have already achieved these goals and others are actively pursuing them. Students seem open to being more engaged and challenged when they perceive the tasks as being meaningful and interesting. As technology allows more independent student learning and as ever more students raise their educational sights, high

schools can become places where all students understand the critical need for them to gear their learning toward specified performance levels and become involved in learning in ways that lead to the development of the complex cognitive skills associated with college success.

Educators can assist students by identifying content that can be mastered by them semi-independently, expecting them to do so largely outside of class and then focusing class time on the types of value-added learning experiences that help them integrate, consolidate, and build on basic understandings. For example, seminar-like courses, particularly writing seminars where students critique each other's work, can put a greater emphasis on projects that have a connection with the real world and require application and integration of content knowledge and investigation of complex problems. Such courses require students to apply content knowledge and discipline-based technical skills as well as develop their understanding of social and political systems. A curriculum geared in this direction will engage students while simultaneously developing the important knowledge and skills for college success.

What Postsecondary Faculty and Administrators Can Do

Many colleges and universities are accustomed to a high degree of autonomy and believe that secondary education's primary role is to serve the needs of higher education. Although many public colleges in particular have begun to acknowledge that their success is inextricably bound up with the capabilities of secondary schools, the changes required of postsecondary education cannot be made if only a few institutions choose to work with a few high schools.

Postsecondary education will have to make over its admissions requirements so that they are clearer about the knowledge and skills students must master to be successful in college. This will not be an easy change to make; in fact, this may be the most difficult change of all. However, there can be no real progress in improving alignment until colleges move beyond course titles and grade point averages to methods that incorporate evidence of student proficiency. Some states have already pioneered possible models, such as Oregon's Proficiency-based Admission Standards System (PASS). Its goal is to have standards that reflect clear agreement between high schools and colleges about what students must know and be able to do, and how this will be measured at the high school level, in the admissions process, and in entry-level college courses.

Postsecondary faculty will also need to interact more with their high school colleagues. This interaction can take place face-to-face, or more indirectly through the sharing of course materials and student work across institutional levels. High-speed Internet connections, the ubiquitous use of e-mail, and the emergence of the PDF file as a universal standard for document exchange make it much easier for high school and college faculty to trade ideas and materials.

Similarly, colleges must be ready to identify more clearly the content of placement tests, the cut scores being used, and the justification for both. Ultimately, placement tests should derive directly from an identifiable body of knowledge and skill for which compelling evidence exists to demonstrate the relationship between mastery of the knowledge and success in entry-level courses. High school educators should have some involvement in the development of these tests if for no other reason than to ensure familiarity with their content.

Colleges can use placement test redesign as a tool to define better the purposes of their general education requirements. When the goals of general education are better understood by high school educators, the secondary school curriculum can be carefully crafted to create the strongest foundation possible to enable students to enter general education courses prepared to succeed.

What Students Can Do

Although many of the changes described here will need to occur at the policy and institutional levels, students themselves will also need to behave somewhat differently if they wish to take advantage of an aligned educational system. Ultimately, the goal of aligning the systems is to send more consistent messages to students about what they should be doing to prepare for college success. Students, for their part, need to be ready to respond to these messages.

Students will need to seek courses and educational experiences that provide the knowledge, cognitive skills, and habits of mind essential to postsecondary success.

The single most important change will be for students to focus on developing the necessary knowledge and skills, as identified by standards linking high school and college. Most importantly, they will need to seek courses and educational experiences that provide the knowledge, cognitive skills, and habits of mind essential to postsecondary success and to engage fully in those learning experiences. Thus students will need to seek out classes that ask more of them, rather than less of them, in writing, research, and other key skill areas. Many educators (and parents) may be surprised to discover how many students actually prefer and thrive with a higher challenge level.

Students will be rewarded for their accomplishments with proper placement into entry-level courses and more opportunities to earn college credit while still in high school. Ideally, they will assemble an electronic collection of their greatest accomplishments, including tests, papers, assignments, and projects that demonstrate their capacity to do the thinking and learning that will be required of them in college. Over time, admissions offices will learn how to interpret these collections against established performance standards.

Such a proficiency-based system of college preparation and admission will reward the desired behaviors and vastly simplify the process of college preparation and admission. When students know what is expected of them and high school instructors are supported by college entrance expectations that value intellectual coherence and competence, the culture of the typical American high school will shift dramatically in the direction of focused academic achievement. Students will have real reasons to become much more actively engaged in monitoring their own knowledge and skills.

As students learn to self-diagnose, they will be able to focus their energies in areas where they know they need additional preparation. Those who feel well-prepared have the option to develop deeper understandings in select areas, primarily to prepare to take full advantage of the college experience. The option to move on to college after demonstrating mastery of requisite knowledge and skills remains as well. An aligned system ultimately allows students more control over their own education and their transition from high school to college.

What Parents Can Do

Parents, too, will have a somewhat different role and different responsibilities in a more aligned educational system focused on student success in college. For one thing, they will be more likely to understand the knowledge and skills their children should be developing in high school and thus ensure that their children understand these requirements and judge the degree to which the high school's instructional program is equipping them for college success.

Parents will need to communicate to their children the importance of acquiring the key knowledge and skills. For example, they could set quality standards for homework. Those standards should reflect the need for students to understand material, not just complete assignments. Thus, there will need to be a parental commitment to reviewing important student homework, particularly research papers and other major projects, so they can ensure that their children are devoting the time and attention required for the activity to be worthwhile and really develop desired skills. Although parents may not always have the content knowledge necessary to tell if their child is doing homework correctly,

they can still determine the quality of the work, particularly if the teacher provides quality standards against which they can measure the work.

This sort of communication between a parent and children of high school age can be challenging, particularly when children become juniors and seniors. However, it can also be a means to retain some common reference points as the child prepares for the inevitable separation that accompanies college attendance. Parents can at least emphasize their stake in and commitment to their child's success by reviewing and discussing how the child does on the Checklist for College Readiness, presented in the appendix of *College Knowledge,* which is designed to help gauge the distance students have to cover to be ready for college-level work.

This communication can be extended to the high school through discussions at parent-teacher nights, where parents focus on the ways in which the high school class addresses college success standards. Is the teacher aware of the Knowledge and Skills for University Success standards and the Checklist for College Readiness, and how does he or she develop the key habits of mind described in *College Knowledge?* Does the teacher use exemplars to point students toward the performance they need to achieve ultimately? Although this sort of questioning could be taken by some teachers as being combative or challenging, parents will be fully justified in asking these questions in a system where alignment is expected. Under the current model, teachers can align as much or as little as they please, and parents have no real way to gauge the appropriateness of the decisions a teacher has made. Parents can be a powerful force to help ensure that high schools are doing all they can to develop the cognitive and intellectual tools students will need in the college environment by encouraging both students and teachers to align their efforts with college success standards.

Beginning the Journey

The American educational system was designed intentionally not to be well-aligned. However, students have spoken by the choices they have made to attend postsecondary education in record numbers. The goal now is to decrease the problems they encounter after being admitted by designing the system so they can make a smooth transition. They want to know what will be expected of them and what they should be doing in high school to be ready to succeed in college. Few high school students approach college preparation with the goal of not succeeding in college. Yet the effect of the current relationship between high school and college is that many who do all they are told to do still enter college only to find that they are unprepared for college-level study. Many do not proceed beyond the freshman year, up to 40 percent require some form of remediation, and only about a third achieve a degree within six years.

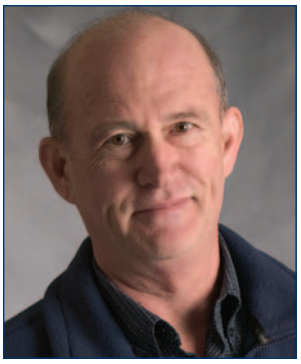
Few people would advocate for the characteristics of the current system. Achieving and managing the necessary changes is a daunting proposition, however. The goal is to offer those interested in improving the relationship between high school and college a starting point for concrete action, and to lay out a path down which those who are interested in improving college success for all students may begin their journey.

Endnotes

[1] Conley, D. (2003). *Mixed messages.* Eugene, OR: Center for Educational Policy Research, University of Oregon.

[2] Habits of mind are ways of thinking that students are expected to develop throughout a course of study. They reflect how experts in a subject area approach the subject. Examples include critical thinking, analytical thinking, and inquisitiveness. These habits of mind are equal to and in some cases greater in importance than specific content knowledge.

About the Author



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