

CASE *Issue* Brief

COLORADO ASSOCIATION OF SCHOOL EXECUTIVES

April 2006

Trends in High School Graduation Requirements: Colorado and the Nation

How meaningful is a high school diploma? Does graduating from high school certify that a student is academically ready to go on to college, or to a job that will allow the student to earn a living wage? If not, what should be done about it?

These questions have been the subject of a number of reports and reforms in recent years, as the changing economy has shifted the knowledge base required for many jobs. Increased information from new accountability systems and from reports of students requiring remediation in college has led many observers to conclude that states must do more to ensure that students are prepared for the new environment they will enter upon graduation. A 2004 report from the American Diploma Project, a project of three major national education reform groups, puts it in stark terms:

The confidence that students and parents place in the diploma contrasts sharply with the skepticism of employers and post-secondary institutions, who all but ignore the diploma, knowing that it often serves as little more than a certificate of attendance. In fact, in much of the United States, students can earn a high school diploma without having demonstrated the achievement of common academic standards or the ability to apply their knowledge in practical ways. The diploma has lost its value because what it takes to earn one is disconnected from what it takes for graduates to compete successfully beyond high school – either in the classroom or the workplace. Re-establishing the value of the diploma will require the creation of an inextricable link between high school exit expectations and the intellectual challenges that graduates invariably will face in credit-bearing college courses or in high-performing, high-growth jobs.

High school graduates themselves echo these concerns. When Achieve, Inc. surveyed recent

graduates about their own perceptions of their preparedness, nearly half of those who had gone on to college and nearly 60 percent of those who had gone into the workforce reported that they were only somewhat well prepared, or not well prepared for their experiences. Eighty-six percent of those who went to college reported a gap in their preparation in at least one area.

Notably, concerns about preparedness for both higher education and employment are converging. Researchers report similar concerns from both employers and colleges. Many observers attribute this to the increased levels of skills, knowledge, and collaboration required in today's workplace. In many surveys, employers actually are more frustrated than college professors with the skill and knowledge levels of recent high school graduates.

Former Federal Reserve chairman Alan Greenspan has spoken of the need for the employees of the future to be extremely adaptable to both workforce needs and to their own life situations. If students are prepared for any future, they then can sort themselves in the workplace according to their own changing wishes and skills. If they are not prepared for more than entry-level work, they in effect will have no choices in their working life.

Nationally, many states are responding to these issues by increasing coursework requirements in high school and/or instituting high school exit exams. After reviewing the national context, this issue brief will examine how Colorado and its school districts are addressing these issues.

The National Context

Statewide graduation standards

Forty-seven states have statewide graduation standards, specifying the coursework that students must have to be eligible to graduate from college.

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Did you know?

In a 2005 study for the National Association of Manufacturers, 84 percent of employers said high school graduates are not well prepared for the work force. Over half say students are not prepared in math and science, and four in ten cite reading and comprehension deficits.

Colorado, with its history of local control, is not one of those states; instead, individual districts are responsible for setting their own graduation requirements.

Several national education organizations have advocated for increasing graduation coursework requirements to reflect their recommendations that all students take coursework that will prepare them for either college or the workplace. The Education Trust, a reform organization concerned with closing achievement gaps, has advocated for years that every student needs to be exposed to a rigorous curriculum equivalent to the traditional college prep curriculum.

ACT is upgrading its own curriculum recommendations. ACT has long recommended that students take a “core curriculum” to be prepared for college-level work. This core curriculum consists of four years of English and three years each of math, science, and social studies. ACT is now referring to this as the “minimum core curriculum.” (In 2004, just over half of all high school students in America took the minimum core.)

ACT’s research found that students with even more rigorous coursework scored higher on the ACT assessments and were more likely to stay in college. ACT is now recommending the following curriculum for optimal chances of success in higher education, calling this curriculum the “Courses for Success”:

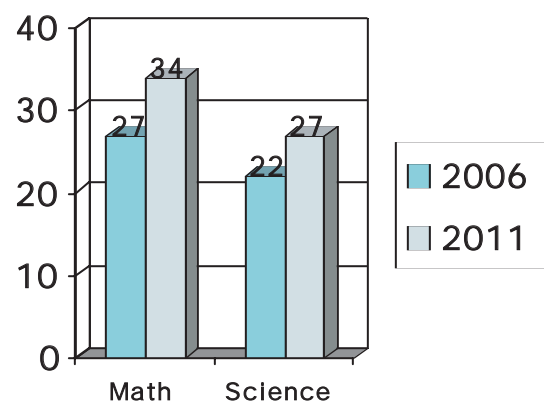
- Four years of English plus one speech class
- Advanced mathematics classes beyond Algebra I, Algebra II, and Geometry, such as Trigonometry and Calculus

- Four years of social studies
- Three years of science including biology, chemistry, and physics

The American Diploma Project, a project of Achieve, Inc., the Education Trust, and the Fordham Foundation, has developed benchmarks for high school graduation standards that it willingly describes as rigorous. The benchmarks, which represent a common core of fundamental literacy and numeracy requirements, were developed from a collaboration of K-12 educators, post-secondary faculty, and front-line workplace managers. This collaboration produced not only descriptions of the benchmarks, but examples of workplace tasks and post-secondary assignments requiring that level of knowledge and skill. The American Diploma Project encourages states and districts to use its benchmarks to develop a rigorous high school curriculum that prepares students for both college and the workplace.

In all of these instances, the groups are recommending that states specify the levels of courses that should be taken, in addition to the number of units. Research shows, for example, that upper level math courses and science courses based in large part on math principles (such as chemistry and physics) have a significant effect on student achievement. Many educators and parents have been concerned that increasing course rigor and/or implementing exit exams will simply result in more students becoming frustrated and dropping out of school. However, research has shown that students with the lowest initial levels of achievement make the greatest gains in

States Requiring 3 or More Units for Graduation



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more rigorous courses, and that students who take a rigorous curriculum score significantly higher on ACT and other tests, regardless of background.

Many states have been responsive to this message, increasing the number of academic credits required for high school graduation, and specifying the level of courses required to earn those credits. For example, according to research from the Education Commission of the States, the number of states requiring at least three units of math for graduation will increase from 27 to 34 by 2011, and the number of states requiring at least three units of science for graduation will increase from 22 states to 27 states. While few states require foreign language credits for graduation, by 2010 students in eight states will be required to take foreign language courses as part of basic diploma requirements.

States that are often mentioned as moving towards successfully aligning their high school graduation requirements with the requirements of college and

TEXAS RECOMMENDED HIGH SCHOOL PROGRAM – EFFECTIVE 2008

Math: 3 units, including Algebra I and II and Geometry

English: 4 units

Social studies: 3 units, including 1 unit World History Studies or World Geography Studies, 1 unit of recent U.S. history, and .5 units each of economics and U.S. government

Science: 3 units, including biology and 2 units selected from chemistry and/or physics

P.E./Health: 2 units, including .5 units health

Arts: 1 unit

Foreign language: 2 units

Electives: 3.5 units

Other: .5 unit speech and 1 unit technology applications

INDIANA'S "CORE 40" EFFECTIVE 2011

Math: 4 units, including 1 unit each of Algebra I, II, and Geometry, or Integrated Math I, II, and III.

English: 4 units

Social studies: 3 units, including 1 unit U.S. history, .5 units each of U.S. government, world history and civilization or world geography, economics, and an additional course

Science: 3 lab science units, including 1 unit biology, 1 unit chemistry or physics, and 1 additional unit

P.E./Health: 1.5 units, including .5 unit of health and wellness

Electives: 5-6 units, including 2.5 units chosen from any combination of units in foreign language, fine arts, and career-technical

the workplace include Indiana, Texas, and Arkansas. Indiana has adopted a "Core 40" curriculum that closely resembles the American Diploma Project benchmarks. Texas has implemented the Recommended High School Program curriculum, effective with the class of 2008. Students wish to take the Minimum Graduation Program instead of the default RHSP curriculum must have the approval of both a parent and a counselor. Similarly, Arkansas is specifying its tough "Smart Core" curriculum as the default curriculum, with parental approval required to move to the "Common Core" curriculum.

Many states have differing course requirements depending upon the type or tier of diploma sought – basic vs. honors, for example, or college preparatory vs. career preparatory. North Carolina, for example, has three diplomas: honors/college preparation, career preparation, and college technical preparation. In some areas, such as English, social studies, and science, North Carolina's unit requirements are the same among the diplomas. In others, such as math and career-specific technical education, the requirements vary. The challenge with this kind of differentiation is to maintain the same amount of rigor

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among the diploma paths, to ensure that students are well prepared for both college and the workplace, and to avoid “tracking” students into less substantive classes based on misperceptions of ability.

High school exit exams

Another common policy response by states has been to institute high school exit exams, requiring students to demonstrate by assessment their proficiency in meeting state standards or some other measure. Unfortunately, in most states that have them, the exit exams measure proficiency against 9th or 10th grade standards – not exactly the level of rigor imagined by efforts such as the American Diploma Project. Exit exams have also encountered a great deal of resistance from those who argue that they will cause greater numbers of students to drop out of high school, particularly those from traditionally disadvantaged backgrounds.

The Center on Education Policy releases an annual report on the effect of high school exit exams. In 2005, CEP reported that 19 states required exit exams for graduation. By 2012, 26 states expect to require their students to take and pass an exit exam to graduate. This will affect more than 72 percent of all American students, including 82 percent of all minority students.

According to CEP, most states with exit exams see large gaps in passage rates among student groups, with English language learners, disabled students, and low-income and minority students passing at rates significantly lower than other groups. All states allow multiple opportunities for passage, with 90 percent of high school seniors eventually passing. Some states provide alternate diplomas for students who do not pass or allow students to submit other types of test scores as an alternative. A few states are providing special assistance and remediation efforts to try to ensure that all students eventually pass. Research on the overall effects of high-stakes exit exams on student dropout rates has so far proved inconclusive.

Not all “exit exams” need to be tests. Rhode Island is rolling out a new proficiency-based portfolio graduation requirement, based on school-developed “Expectations for Student Learning” derived from state standards and other

state and local requirements. Acknowledging that the development and review of portfolios will require a great deal of effort on the part of schools, the state department of education is providing resources to help schools make the portfolio process meaningful.

The Conversation in Colorado

Employers and college faculty in Colorado report the same levels of concern with the preparedness of high school graduates as do their colleagues nationwide. Recently, in research done for the Fund for Colorado’s Future, employer participants in six focus groups across Colorado rated the readiness of high school graduates for the workplace to be 3.6 on a scale of 1-10, with 10 being the highest possible rating of readiness.

3.6

Colorado employer ranking of high school graduates’ workplace readiness, on a scale of 1-10

In one of the focus groups, a representative of the pipefitters’ union described his recent interviews with 85 applicants to the union’s apprenticeship program as revealing a “very weak” pool, with poor math and science skills. Other employers described large numbers of recent high school graduates unable to qualify for even applying to entry-level jobs because of their inability to pass math screening tests. Employers across industries and skill levels in Colorado complained that expectations for students are too low, even as they acknowledged the hard work of teachers and schools.

As one of a handful of “local control” states, Colorado allows school districts to make their own decisions about the requirements that students must meet in order to receive a high school diploma. This culture of local control, and the wide variety in sizes and settings of Colorado’s school districts, has been colliding head-on with another culture: the sense of urgency in the current political environment to put more rigorous requirements in place in K-12 education.

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In Colorado, most of the discussion over increased rigor in high school has been driven by the actions of the Colorado Commission on Higher Education. CCHE has used its authority over institutions of higher education to force the question of the quality of a high school education in Colorado. For example, CCHE has been charged with overseeing a legislatively-mandated remedial education policy for Colorado's colleges and universities. As the data revealed that many students were not prepared for college-level work, CCHE has laid the blame squarely at the doorstep of the K-12 education community, asserting that the lack of rigor in high school is the primary cause of students' lack of preparedness. (See CASE's issue brief on admission and remediation for more information on this issue.)

CCHE's new Higher Education Admission Requirements provide another example of this cultural and political collision. Setting minimum requirements for entry into Colorado's colleges and universities is well within the authority of CCHE. However, by adopting coursework requirements that mirror many of the recommendations made by groups such as the American Diploma Project, CCHE in effect set rigorous graduation requirements for districts that want their students to be able to apply to Colorado post-secondary institutions – which would include all Colorado districts. (Another local control state – Massachusetts – is currently considering similar college entry requirements.) Colorado district leaders immediately criticized CCHE for what they considered an end-run around K-12 local control.

As is readily apparent, CCHE's new admission requirements are fairly consistent with national calls for a more rigorous high school education, although they do not go as far as ACT's "Courses for Success." (In fact, the new requirements are only slightly more stringent than the coursework admission requirements in place at the University of Colorado system since 1988.)

Because Colorado districts are so diverse, virtually any state-level policy faces objections that it is a "one-size-fits-all" solution that does not match with reality in a number of districts. The CCHE college entry policy has not escaped this

argument. District leaders from smaller and more rural districts say that their schools will face huge logistical problems in finding teachers to fulfill the new foreign language requirements, for example. Other districts believe that the new CCHE requirements will cause students to drop out of school, particularly those students who were never planning to attend college anyway.

In response to these concerns, CCHE officials are expressing a willingness to partner with districts to make the new requirements more workable. It seems unlikely, however, that CCHE will back away from the basic rigor of the requirements; instead, CCHE seems willing to be flexible in terms of the timing of certain pieces of the requirements in certain limited circumstances. In fact, more state-level policy developments to align the educational system seem to be in the pipeline. Colorado's state-level policymakers have signed Colorado up as a member of the American Diploma Project Network, committing the state to the following agenda:

- Aligning high school standards with post-secondary and workplace expectations;
- Upgrading high school course requirements so students take a college- and work-ready curriculum;
- Streamlining assessment systems so the tests students take in high school serve as readiness tests for college and 21st century jobs; and
- Holding high schools and post-secondary institutions accountable for student success.

According to Colorado's ADP action plan, members of the Governor's Educational Alignment Council are meeting to explore and assess the feasibility of aligning Colorado's Model Content Standards in grades 9-12 to meet post-secondary and workplace expectations, and defining a set of recommended high school graduation standards that will adequately prepare all students for the post-secondary education system and the workforce. A smaller ADP Action Team is charged with exploring ways to accomplish ADP's third and fourth goals. The entire Colorado action plan can be found at www.achieve.org/achieve.nsf/ADP-ActionPlans?openform. Meetings of the

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Educational Alignment Council have centered on presenting the kinds of national and state data supporting calls for increased high school rigor.

Currently, research conducted by the Fund for Colorado's Future indicates that many Colorado districts will need to make big changes to comply with the new Higher Education Admission Requirements and other similar requirements. Of the 79 percent of districts whose graduation requirements were verified:

- No district currently requires more than 3 units in math, and 25 percent require less than 3 units (HEAR requirement = 4 units)
- Over one-third of districts require less than units in science (HEAR requirement = 3 units, 2 of which are lab-based)
- 80 percent of districts have no foreign language requirements (HEAR requirement = 2 units of the same language)

Some districts are beginning to make these changes. The Denver Public Schools, for example, recently announced new graduation requirements that align with the CCHE Higher Education Admission Requirements. Many other districts are struggling to figure out how they and their students can meet these new requirements. In many cases, more rigorous coursework requirements will require new personnel, staff training, wholesale curricular revisions not only for high school but also for lower grades, effective interventions for struggling students, and/or access to resources that are difficult to find outside the metro area. Finally, districts who want to ensure that students receive a rigorous preparation for college and the workplace may need to handle vocal opposition from parents used to the status quo.

Revising high school graduation requirements to meet new expectations will require the cooperation of all stakeholders within the

CCHE's NEW HIGHER EDUCATION ADMISSION REQUIREMENTS

UNITS REQUIRED FOR ADMISSION TO COLORADO PUBLIC FOUR-YEAR INSTITUTIONS

Subject	Units required for students graduating in spring 2008	Units required for students graduating in spring 2010
English	4	4
Math (Algebra Level I and higher)	3	4
Natural physical sciences (2 units must be lab-based)	3	3
Social sciences (at least 1 unit of U.S. or world history)	3	3
Academic electives	2	2
Foreign language (must be same language)	n/a	2
Total	15	18

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education system, just as our efforts to close achievement gaps and to ensure that all students learn to proficiency standards require Herculean efforts. Districts and schools will need to align their systems and practices, share their experiences with each other, and draw on the support of their communities. As this challenging work moves forward, CASE will provide further resources and information for districts.

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Resources

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The Education Trust, 2003. "A New Core Curriculum for All: Aiming High for Other People's Children." Thinking K-16, vol. 7, issue 1. (Washington DC)

The Fund for Colorado's Future. Numerous documents pertaining to the work of the Educational Alignment Council may be found online at <http://www.fund4colorado.org/events.php>.



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