

End-of-Course Exams

▶ A growing trend in high school-level assessments

In recent years, criticism of high school graduates' lack of readiness for college and work has led a number of states to raise high school graduation requirements — particularly in terms of the number and rigor of courses students must pass. Yet states have found that without a common end-of-course measure, it is impossible to ensure that a course labeled “Algebra I” holds students to the same expectations statewide.¹ At the same time, states with exit exams have evaluated these high-stakes assessments, wondering if new approaches such as end-of-course exams might provide fairer and more accurate accountability measures for students, schools and the state as a whole.

What's Inside

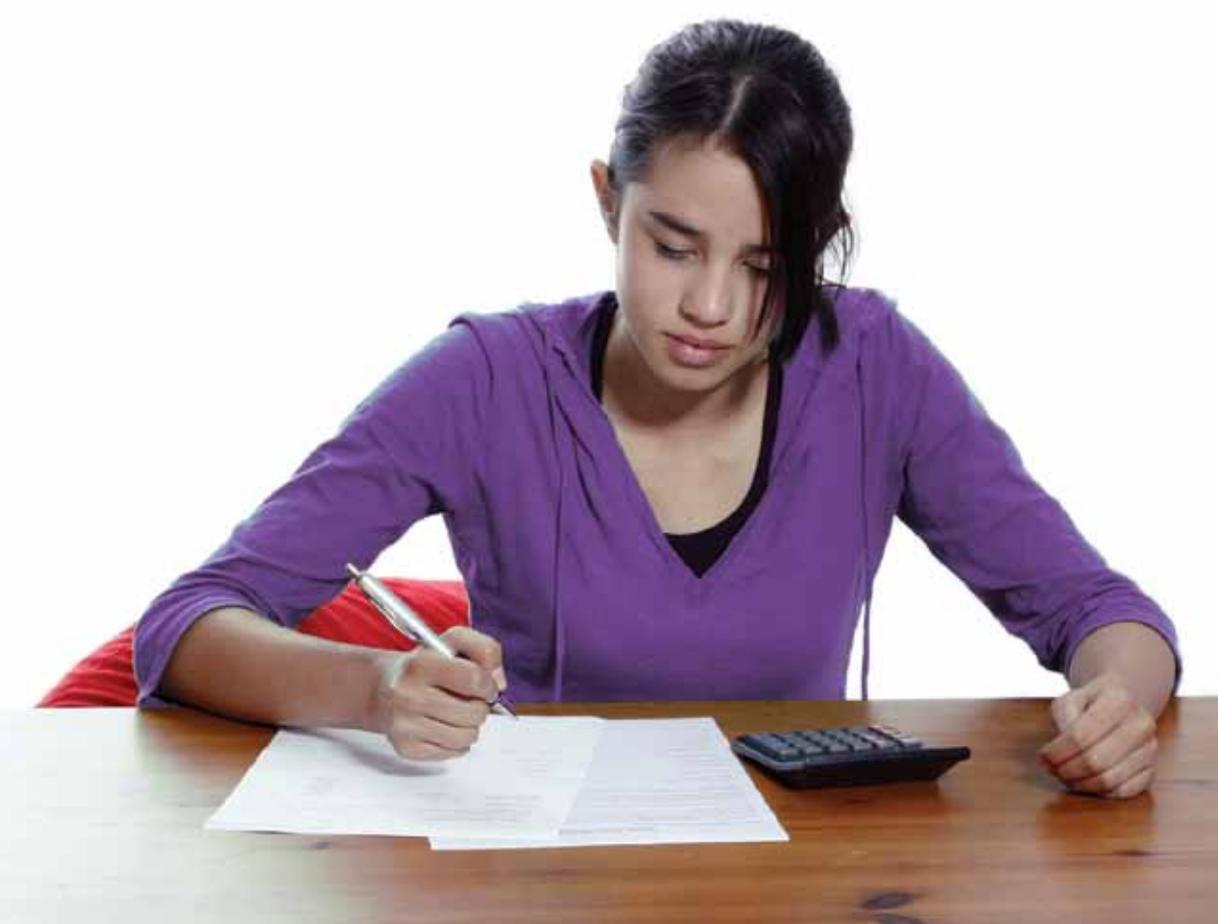
- ▶ Is there a trend toward end-of-course exams?
- ▶ Why end-of-course exams?
- ▶ What “best practices” can improve end-of-course exam programs?

Both of these state policy trends have resulted in the increasing adoption of end-of-course assessments at the high school level. This issue of *The Progress of Education Reform* will address the following questions:

- ▶ What are end-of-course exams (EOCs), and how do they differ from the assessments many states have been administering to date?
- ▶ Why the trend toward EOCs?
- ▶ How many states administer EOCs?
- ▶ For what purposes are these assessments used, including:
 - Are these tests aligned with “college-ready” indicators?
 - Are they used as exit exams?
- ▶ What has been the impact on students of the transition to end-of-course assessments? What does the research say?
- ▶ Are there “best practices” other states can learn from?

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What are end-of-course exams?

End-of-course exams are pretty much what they sound like—they test students, at the end of an academic course, on content expected to have been covered during that course.

How do they differ from other types of high school assessments?

End-of-course exams differ in several ways from the traditional “standardized” high school assessments many states have been administering for purposes of student exit and/or for state and/or federal accountability:

	Standardized Exams	End-of-Course Exams
Timing	Typically administered in grade 10 or 11 as a single test (or over several days, with each subject tested on a different day)	Administered at the end of the academic year when the student completes the related course — if a student elects to complete geometry in grade 9, geometry EOC given at end of grade 9; if a student elects to complete geometry in grade 10, geometry EOC given at end of grade 10.
Content	Significant percentage of content tested from grades <i>before</i> test given (i.e., test given in grade 10 largely tests content from grades 7-9) ²	Primarily tests content from course for which EOC is administered (i.e., Algebra I EOC primarily tests Algebra I content, less emphasis on lower-level mathematics content)

End-of-course exams may be used for exit purposes but are not by default an exit exam. For example, Georgia has developed End-of-Course Tests (EOCTs) in various disciplines but is not using these exams for exit purposes at this time. The Georgia High School Graduation Tests (GHS GT) and the Georgia High School Writing Assessment are the state’s exit exams — only those students completing or seeking credit for a course for which there is an EOCT must take the EOCT.³ Alternatively, Virginia requires students to pass six end-of-course exams (two in English, one each in math, science and social studies, and one of a student’s choice), but allows the student to determine (within certain parameters) which courses/EOCs to apply towards the state requirement.⁴

Why the trend toward end-of-course exams?

Experts and states cite a variety of reasons for supplementing or replacing existing high school assessments with end-of-course exams:

- ▶ **Increase academic rigor:** An English II end-of-course exam testing 10th-grade language arts skills holds students to a higher expectation than a standardized 10th-grade English Language Arts exam, which may test content primarily from grade 9 and lower.
- ▶ **Measure grade-level expectations:** Gauging whether students have achieved expectations specific to their current grade level coursework is a fairer and more accurate means of holding students and schools accountable.
- ▶ **Improve alignment of curriculum with standards:** Adopting state-level standards is no assurance that teachers will address them in instruction — but establishing a year-end test based on key standards increases the likelihood that teachers will incorporate standards-based content into day-to-day instruction. In addition, state standards are often criticized as a mile wide and an inch deep. End-of-course tests (particularly when supplemented by ongoing classroom assessments and standards-aligned activities — see **Indiana** example on page 6) help keep instruction focused on the standards most likely to be reflected on the year-end assessment, and help students understand that, yes, what they’re covering in class today may be on the test.
- ▶ **Let students know what will be expected of them:** When taking a standardized test rather than an end-of-course exam (for school accountability or for exit purposes), there is a certain “element of surprise” for students — students have no way of knowing what will be on the test. However, instituting an end-of-course test increases the likelihood that instruction will be more “syllabus-driven”, as are Advanced Placement (AP) and International Baccalaureate (IB) courses (which have an end-of-course exam element).
- ▶ **Hold students accountable across their high school career:** Some critics maintain that it is unfair to students to award or withhold a high school diploma based on a multiple-subject test administered in a single grade. End-of-course exams typically spread student accountability for learning across multiple grades — holding students responsible for multiple English and math courses commonly taken in grades 9 through 11, for example.

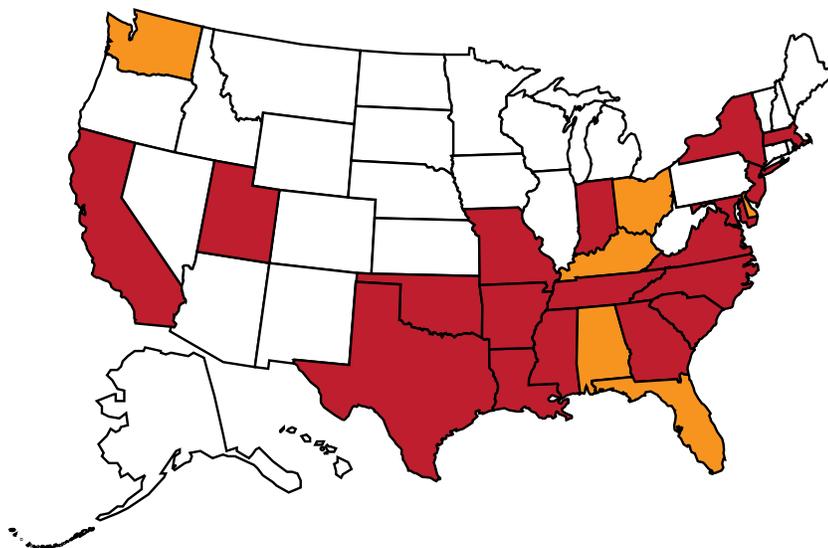
Some observers likewise express concern that once students pass exit exams administered in grade 9 or 10 (or complete the bulk of challenging academic course requirements by grade 10), they may be tempted to “take it easy” during their final semesters of high school. Many states have adopted EOCs for courses commonly taken in grade 11 — requiring students to stay focused on rigorous academics through their junior year.

- ▶ **Ensure expectations of students are consistent statewide:** Reports of students with “A” and “B” averages failing standardized exit exams or needing remediation upon college entry suggest that grade inflation may be at play, or that courses with labels such as “Algebra II” do not deliver advanced content. End-of-course exams are one means of ensuring that a course labeled “Algebra II” meets rigorous, state-held expectations from classroom to classroom across a state.

How many states administer EOCs?

As of the 2009-10 school year, 18 states were administering one or more EOC exams (states in red). This figure does not include (1) states that do not have a state-developed EOC but are participating in the Achieve Algebra I and Algebra II end-of-course exam programs, and (2) states that have made state-developed EOCs available to schools or districts for diagnostic, exit or other purposes, but do not require such tests to be administered statewide to all students who take a specified course (i.e., “Algebra I”) for which an EOC has been adopted.

At least six other states — Alabama, Delaware, Florida, Kentucky, Ohio and Washington State — have adopted policies or plans to administer EOCs statewide, but have yet to implement the proposed assessment program (orange states in map).



For what purposes are EOCs used?

Beyond improving alignment of standards, instruction and assessment, states are using end-of-course assessments as “carrots” to motivate students (to take coursework seriously, enroll in advanced courses, etc.) and “sticks” to hold students accountable (i.e., basing student grades/course credit or graduation on performance on EOCs).

Exit exams: At least 10 states are using or have adopted plans to use end-of-course exams as exit exams. Other states such as Pennsylvania allow districts to use state-developed end-of-course exams as exit exams, but do not require these tests to be administered.

Course grades/course credit: Some states mandate that scores on end-of-course exams be factored into students’ final course grades or be used to determine whether or not a student earns credit for the corresponding course. State policies vary on this count; a state may:

- ▶ Require that students pass the EOC to earn course credit, but not specify that the exam score be factored into the student’s final grade (i.e., Arkansas). Virginia permits (but does not require) middle and high schools to consider the student’s end-of-course assessment score in determining the student’s final course grade.⁵
- ▶ Specify that the student’s EOC exam score comprise a certain percentage of the student’s final grade. For example, Georgia requires a student’s score on the End-of-Course Test to count for 15% of the student’s final grade in the course; South Carolina calls for 20% of a student’s final grade to be derived from the student’s score on the respective course’s EOC exam.⁶ North Carolina districts must use results from end-of-course assessments as at least 25% of the student’s final grade in the respective course, and must adopt policies on the use of end-of-course assessment results in assigning final grades.⁷

Advanced diplomas: New York and Virginia permit districts to award honors diplomas to students based in part on student performance on the state end-of-course assessments. In New York, to earn a Regents diploma with honors or a Regents diploma with advanced designation, a student must (among other prerequisites) earn an average of at least 90% on all Regents exams required for the diploma.⁸ To earn an Advanced Studies Diploma or Advanced Technical Diploma, a Virginia student must, among other requirements, pass three additional end-of-course exams (beyond the six required for the standard diploma) — one additional EOC exam each in mathematics, lab science, and history and social sciences.⁹

State scholarship eligibility: New York awards “Scholarships for Academic Excellence.” High schools select scholarship recipients based on the weighted average of scores on Regents exams (or an approved substitute assessment) in: (1) comprehensive English, (2) global studies, (3) U.S. history/government, (4) level 3 math, and (5) two or more of four science subjects: earth science, biology, chemistry and physics, provided all such exams are offered in the high school. (High schools that have not administered all such Regents exams must select scholarship nominees based on class rank or a locally developed assessment in English and math.)¹⁰

Identification of students in need of remediation: In Arkansas, a student required to take a general end-of-course assessment who does not achieve the minimum scale score may not receive credit for the course until he/she has participated in the remediation activities in the student's individualized academic improvement plan — focusing on the student's area of weakness on the end-of-course exam.¹¹

Alignment with “college-ready” or “career-ready” expectations: In spite of recent interest in embedding college- and/or career-readiness indicators in high school assessments, few end-of-course assessments (current or proposed) appear to have an explicit, statewide college- or career-ready benchmark built in. Texas is one exception. The state is transitioning from its existing grade-11 exit exam to a set of end-of-course assessments that will be used for exit purposes. The exams will include college-ready and career-ready indicators. Indiana's Core 40 curriculum, which will become the default high school curriculum and college admissions requirements for the Class of 2011, incorporates college- and career-ready standards developed by K-12 and postsecondary stakeholders and employers in the state.¹² Student attainment of these college- and work-ready standards is measured by EOCs in English 10, Algebra I and Biology I.¹³ (See “Best Practices” on page 6 for further details on approaches in Texas and Indiana.)

Beyond student “carrots” and “sticks”

Some states with EOCs are using or have plans to use these assessments for state and federal accountability at the high school level, though the same cut scores or portions of the test may not be necessarily used for student and external accountability purposes. For example, Delaware, which will introduce EOCs in the 2010-11 school year, plans to administer two-part EOCs, broken into “Part A” and “Part B”. Only Part A, an “online, immediately scored, fixed-form or adaptive test”, will be used for federal and state accountability; “Part B” will “[include] a small number of challenging extended-response items or writing prompts for English language arts ... and will be used only for student accountability purposes and local educational decisions, such as inclusion in course grades.”¹⁴

What does the research say?

Many wonder about the impact of holding students, particularly at-risk students, to higher expectations, such as testing students on grade-level content and potentially using those test results to determine student graduation. Admittedly, little research addressing this question is available, due to the fact that:

- (1) End-of-course assessment programs in most states are relatively new. In many cases, states are just now implementing end-of-course assessment programs and have few (if any) cohorts of high school graduates/college graduates from which to draw conclusions. Other states have just recently made once-optional EOCs mandatory (i.e., New York), or intend to do so with a future graduating class (i.e., Indiana), thereby accumulating test data on a pool of students who would not have previously self-selected into EOC courses—and making it more difficult to draw conclusions on the impact of EOCs on student outcomes.
- (2) Adoption of EOC programs has been accompanied by changes in methods of calculating high school graduation rates and/or improvements to state data systems. These advances result in more accurate high school graduation data that cannot be used to fairly compare, for example, this year's dropout rate with the dropout rate from a few years ago.

However, some state experience suggests that EOC programs may either positively impact student outcomes, or at least not portend the negative outcomes that critics warn of. Indiana's Core 40 curriculum, which includes rigorous high school courses and end-of-course exams, will become the default high school curriculum effective with the Class of 2011. Until now, student completion of the curriculum since its introduction during the

ECS Resources

State Approaches to Improving High School Outcomes: A National Perspective

This PowerPoint, presented in October 2009 to Oklahoma's Legislative Task Force on Achieving Classroom Excellence, discusses recent state trends in secondary-level reform, including end-of-course exams and exit exams.

<http://www.ecs.org/html/clearinghouse/OKLegislativeTaskForce.pps>

Recent State Policies/Activities: High School — Exit Exams

Summaries and links to newly enrolled and enacted state legislation and recently approved state board rules from across the states, including on end-of-course exams used to determine high school graduation. Updated weekly.

<http://www.ecs.org/ecs/ecscat.nsf/WebTopicView?OpenView&Count=-1&RestrictToCategory=High+School--Exit+Exams>

Recent State Policies/Activities: Assessment

Similar to above, but on K-12 assessment generally, including end-of-course exams (may not include exit exam policies).

Updated weekly.

<http://www.ecs.org/ecs/ecscat.nsf/WebTopicView?OpenView&count=-1&RestrictToCategory=Assessment>

High School-Level Assessments Database

This 2007 database provides a baseline for state activity on EOC exams. The “Include End-of-Course Exams” view (<http://mb2.ecs.org/reports/Report.aspx?id=1158>) indicates the subjects in which EOCs were being administered or planned in spring 2007. The “End-of-Course and/or Exit Exams Used for NCLB Accountability” is self-explanatory. <http://mb2.ecs.org/reports/Report.aspx?id=1255>

Other Resources

State High School Exit Exams: Trends in Test Programs, Alternate Pathways and Pass Rates

Provides an overview of the current status of state-level exit exam programs, including states in which end-of-course exams are used to determine high school graduation.

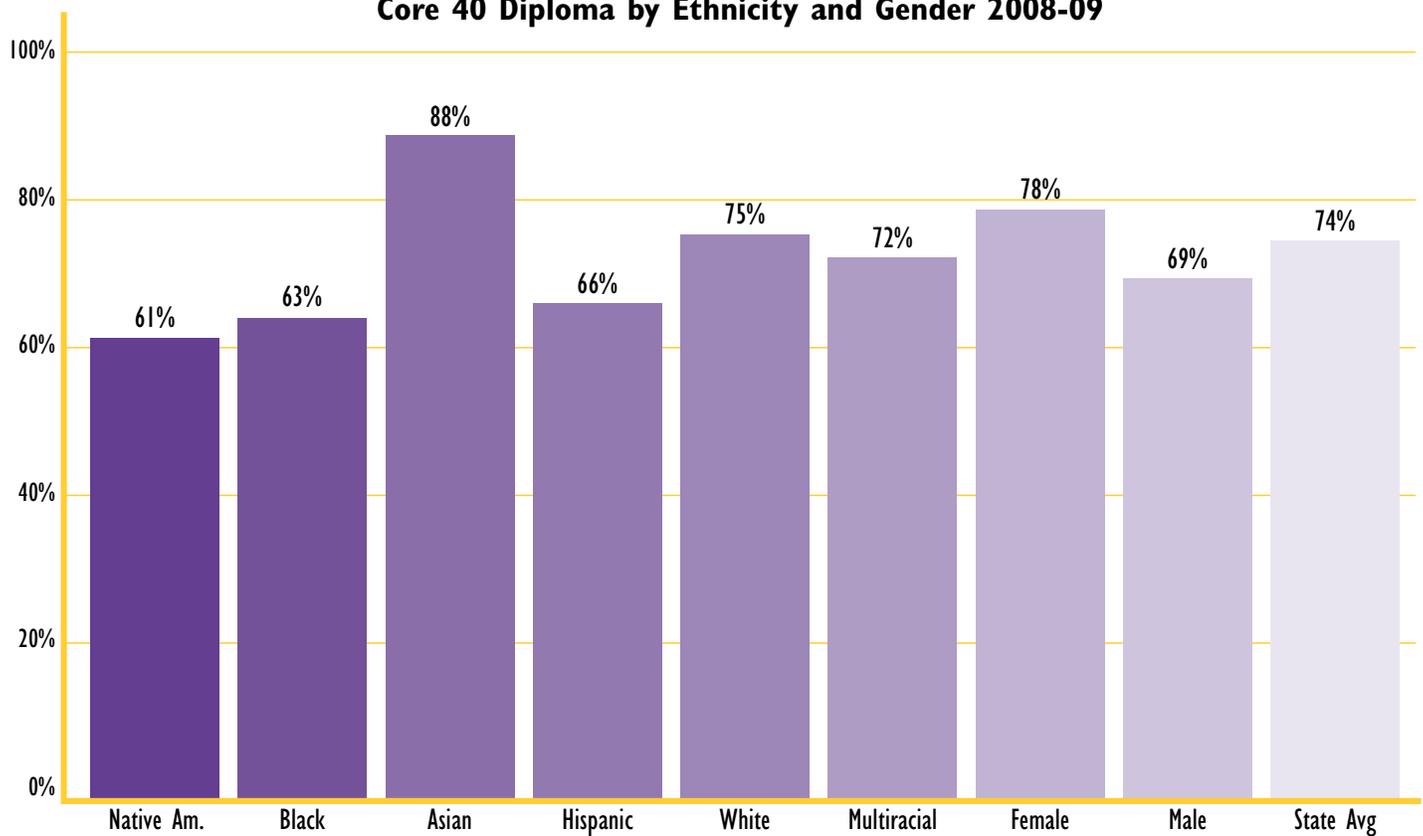
<http://www.cep-dc.org/index.cfm?fuseaction=page.viewPage&pageID=578&nodeID=1>

1990s has been optional. Yet each year since 1998, when the first cohort of Core 40 students graduated, the state has seen: (1) growing percentages of low-income students and students from all racial groups opt into the Core 40 (or more rigorous Honors diploma program) and (2) rising high school graduation rates.

In the Class of 1998, just 23.7% of public high school graduates (including 23% of black graduates and 29% of Hispanic graduates) completed the Core 40 curriculum (and 19.1% completed the Honors curriculum, for a total of 42.8% of graduates opting out of the “Regular” pathway).¹⁵ By the Class of 2009, the percentage of graduates self-selecting into the Core 40 pathway had nearly doubled — to 43% — and combined with the 30.9% of graduates choosing the Honors curriculum, 73.9% of public high school graduates had voluntarily completed a pathway above the “Regular” curriculum.

By 2009, the percentage of black graduates choosing the Core 40 or Honors programs had nearly tripled from the 1998 figure to 63%, and the percentage of Hispanic graduates opting for the Core 40 or Honors programs had more than doubled, to 66%.¹⁶ At the same time, the overall high school graduation rate rose from 1998-2005, from 88.3% to 89.8% (using the state’s old calculation methodology). Under the state’s new system for calculating graduation rates and the National Governors Association (NGA) methodology, the graduation rate has made annual progress since 2006: from 76.1% in 2006 to 81.5% in 2009 using the state’s four-year rate, and from 73.3% in 2006 to 81.2% in 2009, using the NGA methodology.¹⁷

Core 40 Diploma by Ethnicity and Gender 2008-09



	Percent	Core 40 Diploma	Total Diplomas
Native Am.	61%	85	140
Black	63%	3811	6066
Asian	88%	736	833
Hispanic	66%	1769	2695
White	75%	39642	52546
Multiracial	72%	972	1350
Female	78%	25586	32781
Male	69%	21429	30849
State Avg (Public)	74%	47015	63630

Source: *Indiana Accountability System for Academic Progress*,
© Indiana Department of Education

http://mustang.doe.state.in.us/TRENDS/core40_sub.cfm?schl=&corp=&year=2009&pub=1&core40=1

Best Practices

Make available classroom resources to keep students, instruction on path to success on EOCs:

Indiana makes available a variety of online resources to help teachers incorporate into day-to-day instruction the skills and knowledge students will need to demonstrate to pass the EOCs. These tools include item samplers and standards-based classroom assessments and activities. A “High Achiever” online tool allows teachers to develop Algebra I tests and exercises aligned with state standards.¹⁸

Provide professional development and technical assistance to help teachers embed standards in EOC courses:

Virginia stipulates that all candidates for teacher licensure and licensure renewal receive professional development in instructional methods that promote student academic progress and effective preparation for the state end-of-course assessments.¹⁹ Texas makes grants available to districts, regional education service centers, nonprofit organizations, and institutions of higher education to provide technical assistance and professional development activities for public school teachers and administrators on the college readiness standards and expectations (including those embedded in end-of-course assessments).²⁰

Identify grade inflation and misalignment between instruction and EOCs: Arkansas legislation directs the department of education to match each student’s end-of-course test score with the letter grade received in the corresponding course, and identify the percentage of students who earned a “B” or “A” in an EOC course but who did not pass the corresponding EOC on the first attempt. The department must (1) annually report to the state board and legislature any high schools in which more than 20% of the students received a “B” or “A” but did not pass the related EOC on the first attempt, (2) investigate the classroom practices in any district in which more than 20% of the students received a “B” or “A” but did not pass the related EOC on the first attempt, and (3) suggest to the local superintendent and board any recommendations or changes that would improve classroom instruction and student performance on end-of-course assessments. The 2009 grade inflation report is available on the department of education Web site.²¹

Align with “career-ready” measures:

Texas requires that student performance on end-of-course exams be used to evaluate Jobs Corps diploma programs in the state.²²

Provide remediation for students who do not meet college-ready benchmarks:

Texas legislation directs the commissioner of education and commissioner of higher education to jointly develop standards (“essential knowledge and skills”) for remedial “college preparatory” courses for high school seniors who did not meet college readiness standards on the end-of-course assessments. Courses must be designed to prepare students for success in entry-level college classes, and must be supplemented by state board-adopted instructional materials that include technology resources that enhance the effectiveness of the course and draw on established best practices. The state education agency, in consultation with the higher education coordinating board, must adopt an end-of-course assessment for each college preparatory course to ensure course rigor. Just as with the “regular” end-of-course assessments, EOCs for college preparatory courses must include items that indicate college readiness. The state board must approve standards for each college readiness course by September 2010, and the courses must be made available by the 2014-15 school year.²³

The screenshot shows the Indiana Department of Education website. At the top, there is a search bar and a navigation menu with categories like 'About Indiana', 'Agriculture & Environment', 'Business & Employment', 'Education & Training', 'Family & Health', 'Law & Justice', 'Public Safety', 'Taxes & Finance', and 'Tourism & Transportation'. The main header features the 'Indiana Department of Education' logo and the tagline 'SUPPORTING STUDENT SUCCESS'. Below this, there is a 'RESOURCES SEARCH' section with a search bar and a dropdown menu for 'TYPE'. The dropdown menu is open, showing a list of resource types: Select, Lesson plan, Interactive resource, Presentation, Tool, Collection, Classroom activity, Classroom assessments, Student interactive, Unit of instruction, Literature, Curriculum support, Activity, Student activity, Research study, Reference, and Project. The page also includes a sidebar with various links and a calendar for April 2010.

Endnotes

- 1 Jennifer Dounay, *Ensuring Rigor in the High School Curriculum: What States Are Doing* (Denver: Education Commission of the States, 2006), <http://www.ecs.org/clearinghouse/66/67/6667.pdf>, (accessed April 9, 2010).
- 2 Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams* (Washington, D.C.: Achieve, Inc., 2004), <http://www.achieve.org/files/TestGraduation-FinalReport.pdf>, (accessed April 9, 2010).
- 3 Georgia Department of Education, *Georgia High School Graduation Tests (GHSGT)*, http://www.doe.k12.ga.us/ci_testing.aspx?PageReq=CI_TESTING_GHSGT, (accessed April 9, 2010); Georgia Department of Education, *End of Course Tests (EOCT)*, http://www.doe.k12.ga.us/ci_testing.aspx?PageReq=CI_TESTING_EOCT, (accessed April 9, 2010).
- 4 8 VAC 20-131-50(B).
- 5 8 VAC 20-131-30(E).
- 6 GA. COMP. R. & REGS. R. 160-4-2-.13(2)(E); S.C. CODE REGS. 43-262.4(II)(C); South Carolina Department of Education, *End-of-Course Examination Program (EOCEP)*, <http://ed.sc.gov/agency/Accountability/Assessment/old/assessment/programs/endofcourse/End-of-CourseExaminationProgramEOCEP.html>, (accessed April 12, 2010).
- 7 N.C. ADMIN. CODE TIT. 16, R. 6D.0305(c).
- 8 N.Y. COMP. CODES R. & REGS. TIT. 8, § 100.5.
- 9 8 VAC 20-131-50(D) AND (E).
- 10 N.Y. COMP. CODES R. & REGS. TIT. 8, § 145-9.1 through 145-9.5; N.Y. EDUC. LAW § 605-A.
- 11 ARK. CODE ANN. § 6-15-2009(c).
- 12 Communication with Cheryl Orr, Indiana Commission for Higher Education, March 12, 2009.
- 13 Indiana Department of Education, *End of Course Assessments*, <http://www.doe.in.gov/eca/>, (accessed April 16, 2010).
- 14 Delaware Department of Education, *Delaware Comprehensive Assessment System (DCAS): End-of-Course Specifications for Select High School Courses*, <http://www.doe.k12.de.us/infosuites/staff/ci/files/DCASESHC.pdf>, (accessed April 12, 2010).
- 15 Indiana Department of Education, *Core 40 Diploma by Ethnicity and Gender, 1997-98*, http://mustang.doe.state.in.us/TRENDS/core40_sub.cfm?schl=&corp=&year=1998&pub=1&core40=1 and *Graduates Time Series, State Total (Public School)*, http://mustang.doe.state.in.us/TRENDS/graduate_time.cfm?corp=0000&pub=1 (accessed April 16, 2010).
- 16 Indiana Department of Education, *Core 40 Diploma by Ethnicity and Gender, 2008-09*, http://mustang.doe.state.in.us/TRENDS/core40_sub.cfm?schl=&corp=&year=2009&pub=1&core40=1, (accessed April 16, 2010).
- 17 Indiana Department of Education, *Graduation Rate, Old Definition (Public)*, <http://mustang.doe.state.in.us/TRENDS/trends1.cfm?var=gradrt>, *Graduation Rate, 4 Year or Less (Public)*, <http://mustang.doe.state.in.us/TRENDS/trends1.cfm?var=grad4>, *Graduation Rate National Governors Association*, http://mustang.doe.state.in.us/TRENDS/trends1.cfm?var=grad_nga (accessed April 16, 2010).
- 18 Indiana Department of Education, *End of Course Assessments*, <http://www.doe.in.gov/eca/>, (accessed April 16, 2010); Indiana Department of Education, *High Achiever*, <http://www.doe.in.gov/highachiever>, (accessed April 16, 2010).
- 19 VA. CODE ANN. § 22.1-298.1(D)(3); 8 VAC 20-22-40.
- 20 TEX. EDUC. CODE ANN. § 21.4511, 39.023(c-4)(1).
- 21 Arkansas Department of Education, *2009 Grade Inflation*, http://arkansased.org/about/excel/grade_inflation_2009_020410.xls, (accessed April 12, 2010); Arkansas Department of Education, *Revised 2009 Grade Inflation Report*, http://arkansased.org/about/pdf/releases/revised%20gi_list_release_021210.pdf, (accessed April 12, 2010); ARK. CODE ANN. § 6-15-421 (D)
- 22 TEX. EDUC. CODE ANN. § 18.006.
- 23 TEX. EDUC. CODE ANN. § 28.014.

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