

CASE *Issue* Brief

COLORADO ASSOCIATION OF SCHOOL EXECUTIVES

December 2007

A New Direction for Colorado Student Assessment *The Case for ACT's Educational Planning and Assessment System (EPAS®)*

As many schools struggle to meet the demands of No Child Left Behind, educators continue to look for more effective ways to boost achievement and prepare students for college and the workforce. The package of education reforms announced by Governor Ritter in early December 2007 includes a proposal to “create a statewide guidance policy that will establish ‘post-secondary preparation’ as the main purpose of Colorado’s K-12 education system.”

The Colorado Student Assessment Program (CSAP) gives us a glimpse backward at how well last year’s classes absorbed the lessons required to meet state standards in math, reading, writing, and science. Only when they get the results in the fall – several months after the tests are taken in the spring – do parents find out whether their sons and daughters were excelling, making the grade, or falling behind.

Longitudinal information from the CSAP now lets us track the performance of individual students as they move from grade to grade. But while valuable, that data is not designed to show whether those students are getting the knowledge and skills they need to succeed after high school.

About this issue brief

The Colorado Association of School Executives (CASE) has produced this issue brief to create awareness about a topic that has been the subject of lively state-level discussion in recent months and a long-standing concern for educators.

The current system of student assessment in Colorado middle level and high schools does not serve students well when it comes to connecting instruction with assessment and preparing students for college and the workforce as well as citizenship. Nor does our current assessment system give educators, parents, and the public an accurate picture of what students know and are able to do when they graduate from high school.

A number of Colorado school districts have embraced ACT's Educational Planning and Assessment System (EPAS®), which they are finding creates a sense of continuity for students as they move from middle level to high school and on to college and the work force. Thus, this issue brief explores the benefits of EPAS®.

We also present other points of view about EPAS®. Not all of the interested parties agree that this system will best serve students or that it ought to replace the Colorado Student Assessment Program (CSAP).

Clearly more learning is needed. Future CASE issue briefs will explore related topics to bring more clarity and understanding to the issue.

In an effort to better gauge and improve the college and workforce readiness of their students, several Colorado school districts

and many nationwide have implemented all or part of ACT's Educational Planning and Assessment System (EPAS®). This is a series of tests given as early as the eighth grade and culminating in the ACT, the college entrance exam required of all Colorado 11th-graders since 2001. ACT, the not-for-profit organization that develops and administers the exam with the same name, describes EPAS® as "a longitudinal approach to educational and career planning, assessment, instructional support and evaluation... a unified, comprehensive system for measuring and monitoring student achievement over time."

Mike Paskewicz, superintendent of Adams 12 Five Star Schools, is a big fan of EPAS®. In his district, eighth- and ninth-graders take a version of EXPLORE, the first component of EPAS®, and 10th-graders take PLAN, the second component. Adams 12 principals use the results to assess teacher effectiveness and help teachers realign their curriculum, if necessary, to cover the standards in the ACT more thoroughly. Guidance counselors and teachers use the results, which predict performance on the ACT, to help students recognize strengths and weaknesses.

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**Mike Paskewicz, superintendent,
Adams 12 Five Star Schools**

"That assessment process is giving us more factual data for our staff so they can zero in on what kids need most in order to prepare

for college," Paskewicz says. The ACT is the "gatekeeper to college," he adds, and EPAS® helps students get ready for the exam in ways that the CSAP does not. Plus, he says, they take it more seriously than the CSAP.

"Our job is to prepare kids, whether they're going to college or not, to be ready to go," Paskewicz says. "There is not a single college or university in the state of Colorado or nationwide that asks for a kid's CSAP scores as an entry requirement. So why is it we're putting so much time and effort into a CSAP that has no meaning for kids beyond the 10th grade and no meaning for parents? Even though CSAP has good standards in it, EPAS® has equally as challenging and aggressive standards. And it is a clear use for kids as they get ready to go to college."

Components of EPAS®

Each EPAS® component consists of multiple-choice tests in math, English, reading, and science, and the results are reported on a single-score scale:

- EXPLORE — Scores range from 1 to 25. Currently taken by 20 percent of Colorado eighth-graders, EXPLORE assesses academic progress at the eighth- or ninth-grade level and can help students select high school courses. It also collects information on student interests, plans, and characteristics and helps students begin to understand the wide range of career options available to them.
- PLAN — Scores range from 1 to 32. Currently taken by 57 percent of Colorado 10th-graders, PLAN assesses

academic progress at the 10th-grade level, and predicts ACT performance so that students know if they are on track for college. It can help students further investigate career and training possibilities.

- ACT — Scores range from 1 to 36. Widely accepted as a college entrance exam, the ACT assesses high school educational development and a student's ability to do college-level work. An optional writing test measures skill in outlining and writing a short essay. ACT results also are used, along with CSAP data, as a key measure in calculating high school ratings for the Colorado School Accountability Reports.

Additionally, ACT offers WorkKeys, a system for measuring workplace job skills such as applied mathematics, business writing, teamwork, reading for information, and applied technology. The tests are designed to help educators identify gaps between students' skills and the needs of employers.

The Mesa County Valley School District in Grand Junction created a job certification program around WorkKeys. Students take three exams — applied mathematics, reading for information, and locating information — and receive a gold, silver, or bronze certificate that lists their WorkKeys scores and is signed by the school district superintendent and the chamber of commerce president.

Measuring success

ACT says its research shows that EPAS® improves students' readiness for college at

schools using the program. Among the conclusions:

- Students participating in all three programs score 0.6 to 1 point higher on ACT subject tests and 0.7 point higher on the ACT composite than students who do not participate in all three. Students of all racial and ethnic backgrounds do better on the ACT if they've taken EXPLORE and PLAN.
- Over time, schools using PLAN typically increase average ACT composite scores 0.2 to 0.3 point more than schools not using PLAN, and schools using PLAN typically increase average ACT math scores 0.6 point more than schools not using PLAN.
- Students who take EXPLORE and PLAN are more likely to take a college-preparatory core curriculum in high school than students who don't. Students increase their odds of taking higher-level math courses — beyond Algebra 1, Geometry and Algebra 2 — by 28 percent if they've taken EXPLORE and PLAN. Those students increase their odds of taking Chemistry and Physics by 27 percent.
- Students who meet EXPLORE and PLAN college readiness benchmarks — developed by ACT in 2004 to correspond with a student's chances of success in certain college courses — have a very high chance of meeting college readiness benchmarks for the ACT exam.
- Students who take PLAN are twice as likely to consider college as students who do not.

Louisiana began offering EXPLORE and PLAN in 2001 as part of an effort to raise academic standards in a state where 44 percent of all high school students drop out. Three years later, Louisiana students did better than ever on the ACT and experienced a larger average gain than students in any other state, ACT says.

“...At the high school level we’re essentially stopping school for multiple days across the state to give the CSAP tests when we could be doing something [EPAS®] far more efficiently and economically that would give us better predictive data.”

**Monte Moses, superintendent,
Cherry Creek School District**

In Chicago, where 77 percent of students are poor as defined by their eligibility for free or reduced-cost lunches, the district started using EXPLORE and PLAN to prepare for Illinois’ new Prairie State Achievement Examinations (which include the ACT) in 2001. ACT scores dipped the first year, likely because more students of all achievement levels took the assessment. But by 2006 the average ACT composite score for the nearly 100 percent of Chicago high school graduates who were required to take the test was higher than it was for the much smaller group of college-bound graduates who chose to take it in 1999.

In Adams 12, the average ACT composite score has steadily increased to 18.3 in 2007 from 17.0 in 2001. That compares to an increase of only 0.2 point statewide over the same period (19.8 in 2007 from 19.6 in 2001).

Stan Hesting, assistant superintendent for school effectiveness and accountability, says the exact impact of EPAS® on the district’s ACT scores is unknown because “it’s not the only thing that’s going on — there are so many variables within a school district.” However, “you can’t miss” by using EPAS®, he says, because “you are teaching the standards that ACT is testing... If you know how your kids performed on the previous assessment, you know what they need to know to do better on the next assessment, and that’s in your course content, how can you miss?”

The Cherry Creek district added EXPLORE for eighth-graders three years ago and has given PLAN to 10th-graders for about a decade. Cherry Creek’s ACT scores have stayed about the same over the last five years, but Superintendent Monte Moses says he knows that EPAS® is valuable because teachers, principals, guidance counselors, students, and parents tell him so. One aspect he finds particularly useful: the benchmark scores that are “empirically linked to the grades that students are likely to make in college.” For example, if a student reaches a certain benchmark score in English, there is a 50 percent chance he or she will earn a B or better in first-year college English and a 75 percent chance that grade will be a C or better.

“I think that’s very relevant in helping young people not just see that an ACT score is used by college admission officers,” Moses says, “but to get a gauge on just how much they’re going to have to push themselves to succeed at that next level of education.”

As a member of Governor Ritter’s P-20 Education Coordinating Council, Moses serves on the

Preparation and Transitions subcommittee that recommended the state fund the EPAS® package for all districts, to be administered by them on a voluntary basis. The subcommittee did not recommend any changes to the CSAP, although Moses says he personally would advocate replacing eighth-grade CSAP exams with EXPLORE and 10th-grade CSAP exams with PLAN. “I think the data would be more aligned with college and workforce readiness, parents would find it more valuable and it would take far less time to administer,” he says. “...At the high school level we’re essentially stopping school for multiple days across the state to give the CSAP tests when we could be doing something far more efficiently and economically that would give us better predictive data.”

The Denver Area School Superintendents’ Council (DASSC) also supports replacing the eighth-grade and 10th-grade CSAPs with EXPLORE and PLAN, respectively, “to provide a post-secondary lens to high school work.” In addition, DASSC wants to incorporate the optional writing exam into the ACT in 11th grade, institute WorkKeys as part of the assessment and counseling process, and offer students incentives — such as college tuition credits — for high achievement.

Concerns about EPAS®

Some educators and testing experts, however, are not prepared to endorse EPAS® as a replacement for any or all aspects of the current state assessment system in Colorado.

Ken DeLay, executive director of the Colorado Association of School Boards, says he sees how EPAS® could be an effective guidance tool for

individual students so he does not oppose a voluntary, state-funded EPAS® program, “and I even am somewhat interested to see how it goes.” But he is adamant that EPAS® not supplant any part of the CSAP without a thorough review of the state’s current K-12 standards and battery of CSAP assessments. The Colorado Department of Education, under new Education Commissioner Dwight Jones, has begun that process.

“I am very troubled by this idea that we would adopt an ACT set of exams as part of our assessment system before we finish the work on standards,” DeLay says. “...I think the natural order of things is that you ought to do your standards and then you do your assessments to reflect what your standards are.”

Those revised standards should include college and workforce readiness skills, like those stressed by EPAS®, says Elliot Asp, the Cherry Creek district’s assistant superintendent for performance improvement. But they also ought to incorporate “21st century skills” not addressed by EPAS® such as critical thinking, problem solving and metacognition (thinking about one’s own thinking). Beyond those general skills, Asp would include more specific skills grouped around information literacy, continuous learning, and operating in a globally competitive world.

Asp agrees with DeLay that the standards first must be revisited. He also is concerned that EPAS® “as it currently stands off the shelf” would not work as an accountability tool in Colorado. To meet No Child Left Behind requirements, states must demonstrate that

their K-12 assessments measure state standards “in a technical sense,” Asp says. “And it’s already clear that ACT doesn’t do that.”

But Moses says “it’s almost a foregone conclusion” that once Colorado standards are reviewed and revised, they will closely resemble ACT standards and similar standards defined by Achieve Inc.’s American Diploma Project. He notes that two years ago the Colorado Education Alignment Council, which had been appointed by Governor Owens, asked teachers around the state to compare Colorado’s current education standards with Achieve and ACT standards, “and in just about all cases teachers said the Achieve and ACT standards are better ... they are better aligned with college and workforce readiness.”

“This ground’s already been plowed and I fear we’re just going to go back and replot it and get to the same conclusion,” Moses says. “But that’s OK. If that gives us a firmer definition of what good college and workforce readiness standards look like, that should be embedded in the curriculum throughout Colorado schools, that’s fine.”

Lorrie Shepard, dean of the University of Colorado’s School of Education and an expert in educational assessments, has additional concerns about EPAS®. Compared to the CSAP, she says, ACT’s package of exams “is a very limited measure of what you want high school students to learn,” especially in science and English. “What you have to worry about is what do kids learn if that becomes the only test?” Shepard says. Among her specific criticisms:

- The science exam is actually a

comprehension test. A student is given all pertinent information in passages or graphs “and you’re not bringing to bear your knowledge of science ... Because it is multiple choice, you don’t write hypotheses or draw inferences, you pick the one that’s most like the hypothesis or the most warranted inference from the results.”

- The multiple-choice English exam “tests your ability to organize by asking you to pick the best transition sentence, and that is not a good measure of a student’s writing ability.”
- The math exam, though it includes some trigonometry that the CSAP skips, does not ask students to explain their reasoning when solving a problem.

Shepard says the CSAP could be used like EPAS® to provide benchmarks and predict college readiness, if CSAP data were correlated with college freshmen grades and packaged in an understandable way. “I don’t think it’s a legitimate statement to say ACT measures college readiness, CSAP does not,” she says. “That implies a misunderstanding about the substantive differences between the tests. And that’s what I think ought to be engaged before anyone buys such an expensive testing program.”

As for ACT studies showing that participation in EXPLORE and PLAN improves performance on the ACT exam, Shepard says it makes sense that practice would lead to higher scores. “You take the test three times and you’re going to improve your score — slightly,” she says. “Nothing is wrong (with practice), I just feel that people need to know — that’s what you’re

paying for? That's what you're going to do instead of real educational programs?"

Funding EXPLORE and PLAN for all school districts in Colorado would cost the state an estimated \$870,000. The state already spends \$1.5 million to give the ACT to every 11th-grader each year. Each EXPLORE test costs \$5.30 to administer; PLAN costs \$9.20; WorkKeys \$10.50; and ACT Writing \$14.50.

"In addition to its value as an assessment tool, EPAS® provides a means for students, parents, and teachers to see where students stand on the path to college and workforce readiness."

John Hefty, executive director, CASE

In response to Shepard, CASE Executive Director John Hefty says it would not be practical to remake the CSAP into a guidance tool, in addition to being an assessment system, especially when EPAS® already performs that function well and is "embedded in a nationwide process" — the ACT. "Why would you take a system that at this point does not have credibility with students, parents and secondary educators in Colorado and turn that into what would be used in predicting college readiness? ... Why not start with a system that has credibility — EPAS®?"

More than an assessment tool

Hefty sees EPAS® as a tool with multiple purposes for secondary schools. "In addition to its value as an assessment tool, EPAS® provides a means for students, parents, and teachers to see where students stand on the path to college and workforce readiness," Hefty says.

Jo Anne Gearhart, executive director of the Colorado School Counselor Association and a counselor at Broomfield High School in the Boulder Valley School District, agrees. While the association hasn't taken a position on EPAS®, Gearhart says that counselors believe the PLAN is an effective test for sophomores. "It prepares students, starts them thinking about college," says Gearhart.

Hefty says the sequence of EPAS® — EXPLORE, PLAN, ACT and WorkKeys — allows students to think about new possibilities. A student begins to believe, *I too can strive for college. Here's the path, with course work, standards, skills along that path.*

"That realization is a key factor in closing the achievement gap," Hefty says, "when you help students see the possibilities. That's the beauty of it."

Gearhart adds that when students see new options their motivation increases. A student may say, "Maybe I should take harder courses because I'm really not pleased with my score and I want to do better."

Unlike CSAP, the EPAS® assessments offer quick turnaround time between administration and when schools receive student scores. Scores for EXPLORE and PLAN are available within three weeks of the test date, early enough in the school year for results to be used productively. The Adams 12 district provides the test scores to both current and future year teachers to ensure ongoing support for students.

Aligning K-12 and higher education

Another advantage of the package, notes Hefty, is that EPAS® is based on college readiness expectations — constructed in a way to be easily used by high school teachers to determine if the curriculum includes readiness expectations. “That leads to a largely untapped possibility — putting expectations in front of English, math, and science teachers and college professors to get alignment in programs through backward mapping of the curriculum,” says Hefty.

As Colorado standards and assessments are revisited in the coming months, Hefty says he hopes K-12 and college educators will come together to work out ways to improve the college and workforce readiness of students. Though CASE hasn’t taken an official position on EPAS®, Hefty says he would like to see it used statewide as soon as possible — especially as a guidance tool — but not necessarily as the only assessment tool in Colorado for grades eight through 12.

Those who argue that EPAS® alone is “too shallow, that math and science classes should contain more than the college-readiness expectations that come from ACT” may have a point, Hefty says, but there is plenty of room to address additional standards in the high school curriculum and assessment program. “Wouldn’t it be something if we got the vast majority of our students at least that far along, if they did in fact meet these college readiness expectations?”

About the author

This report was prepared for the Colorado Association of School Executives by Denver writer and editor Jeffrey A. Roberts, a newspaper reporter and editor for 25 years, including 23 at The Denver Post. Among many assignments, he covered state government and politics, supervised The Post’s education team and analyzed education-testing data as computer-assisted reporting editor.

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EPAS online at:

<http://www.act.org/epas/index.html>

EXPLORE sample questions:

<http://www.act.org/explore/pdf/ExploreSample.pdf>

EXPLORE career exploration:

<http://www.act.org/explore/pdf/CareerAreaCharts.pdf>

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PLAN sample questions:

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PLAN career exploration:

<http://www.act.org/plan/pdf/CareerAreaCharts.pdf>

The ACT:

<http://www.act.org/education/index.html>

ACT College readiness standards:

<http://www.act.org/standard/>



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