

Transitions To and From High School: Principles, Research Findings & Commentary¹

Colorado Commission for High School Improvement - Committee on Transitions To and From High School
Discussion Draft v3 - Prepared by Spud Van de Water - October 22, 2004

It's Time to Change — Again. Colorado's traditions have given us an education structure that does not build seamlessly from middle school to high school or from high school to the world beyond and does not encourage a pace of learning that fits each student's needs.

The picture in Colorado is similar to the national picture of high school performance painted by the The Education Trust:

In general, the data suggest an object at rest in a world that is rapidly rushing by.

- *High school completion rates have remained the same for nearly 30 years.*
- *Indeed, after decades of leading the world in high school completion, the U.S. currently ranks 17th.*

The situation is hardly more encouraging for what students know and can do.

- *Despite some improvements in the reading skills students bring with them to high school, today's high school students are reading no better when they leave than did their peers a decade ago.*
- *Even in math and science, where recent gains among 17 year olds have been widely celebrated, it turns out that those gains are attributable to improvements below grade 8.*
- *While students are taking and completing more college preparatory courses, the effect on student learning has not been great, raising serious questions about the rigor of those courses.*

Consequently, while our elementary age students perform relatively well on international tests in mathematics and science, we're scoring below most developed countries in both subjects by grade 12. And we do so not because our young people make no growth during their secondary years, but because their peers in other countries grow considerably more.²

The time has come to update the old system by bringing it in line with current and future needs.

The three principles proposed below will accelerate this shift.

Principle #1. Expectations for student learning and development – pre-school through college – must be coherent, coordinated across levels and widely understood by educators, parents and students, especially at critical transition points such as between elementary and secondary school and between high school and college.

Recurring Themes in Relevant Research. Over 30 states have adopted Principle #1 (Colorado is not among them). Their efforts to create a coherent, coordinated system have become known nationally as the P-16 movement. The Education Commission of the States summarizes the movement this way:

P-16 is a shorthand term for a student-focused, comprehensive and integrated system that links all education levels from preschool (P) through the senior year of college (16). It is a powerful framework for policymakers to use to improve teaching and learning and thus better prepare students for living, learning and working in a changing world. . .

A comprehensive P-16 education system offers clear standards, an aligned and rigorous curriculum, effective assessments, clear expectations and widely shared responsibilities. . .

P-16 bolsters student achievement by focusing on early learning, raising academic expectations for all students, conducting constructive assessments, improving teacher quality and aligning student transitions from one level to the next. P-16 is about aligning education, not isolating each sector; closing the achievement gap, not fighting over turf; and responding to new needs, not maintaining the status quo. It is the missing piece in the struggle to make our education system fulfill the needs of all our citizens.³

The National Commission on the High School Senior Year made these recommendations:

Every state should create a P-16 Council and charge it with increasing student access to (and success in) postsecondary education. These councils should be charged with creating significant and systematic linkages between preschool, elementary, secondary, and postsecondary education, linkages that should include aligning standards for high school graduation, college admission, and enrollment in credit-bearing courses. A special focus of these efforts should be increasing the college attendance and completion rate of low-income, disadvantaged, and minority students.

States should require school districts to obtain parental permission before assigning high school students to a level below “college-preparatory” courses, which should be the default curriculum for all students.⁴

Zeroing in on the transition from high school to college, Stanford researchers Michael Kirst and Andrea Venezia conclude:

The current fractured systems send students, their parents, and K-12 educators conflicting and vague messages about what students need to know and be able to do to enter and succeed in college. For example, this research found that high school assessments often stress different knowledge and skills than do college entrance and placement requirements. Similarly, the coursework between high school and college is not connected; students graduate from high school under one set of standards and, three months later, are required to meet a whole new set of standards in college. Current data systems are not equipped to address students’ needs across systems, and no one is held accountable for issues related to student transitions from high school to college. . .⁵

Commentary. The essence of P-16 is knitting together improvement strategies across the entire education spectrum into a coherent whole emphasizing an aligned system featuring smooth transitions and high expectations for all. Although Colorado has worked hard on key P-16 components such as standards, assessments and teacher preparation, there is no comprehensive statewide P-16 strategy. To date, no one in Colorado has shown the vision and leadership required to launch and move a P-16 agenda. This means some important questions are not being addressed:

- Should high school exit requirements be aligned with college entrance requirements?
- Does preparation for high school include completing Algebra I in the eighth grade?
- Does every student now need a “college prep” curriculum to prepare for college and the workforce?
 - o If so, should Colorado make the college prep curriculum the default curriculum for every high school student?
- Does life after high require a more rigorous curriculum in high school?
 - o If so, should Colorado adopt ACT’s “Courses for Success” curriculum?

The answers to these questions will mean a lot to the future of Colorado. The Commission may be the only place in Colorado with the vision and leadership to pursue such questions and advocate for a more coherent system.

If the Commission decides to move in this direction, a fundamental issue will be how to honor Colorado’s deep seated tradition of local control while at the same time moving to align systems and smooth transitions. The Commission will need to explicitly state its sense of how to balance state and local control. Will it tilt toward the state and urge mandated action that all districts must take? Or will it tilt toward local districts by defining the state role as one of providing incentives, sponsoring pilots, and offering technical assistance?

Principle #2. Adults’ expectations for student academic and social performance should be high for all students at all levels. At the secondary school level, the state should set minimum and recommended high school graduation requirements and maintain a web-based database of district graduation requirements as compared to minimum and recommended requirements.

Recurring Themes in Relevant Research. This principle focuses on high expectations for all students. Traditionally our schools have served a sorting function that resulted in high expectations for high achievers while all others were shunted into less demanding tracks. Current and future workplace and citizenship responsibilities demand that all students achieve at higher levels. A rigorous middle and high school curriculum for every student is the next logical step in educators’ efforts to boost student achievement. The Southern Regional Education Board (SREB) suggests how states can influence middle school achievement:

Students in the middle grades can learn more. They can raise their achievement. They can be ready for high school. And they can do this even with raging hormones and the other challenges of adolescence. . . Here are six steps that states can take:

1. *Get the mission right. Set out to prepare students for challenging work in high school.*
2. *Define what students need to know and be able to do to be ready for high school.*
3. *Set high but reasonable standards for student performance.*
4. *Provide lagging students with extra time and extra help, as some states are already doing.*
5. *Get good principals, in part by changing the focus of existing programs for preparing principals.*
6. *Get good teachers, in part by changing licensure rules to require all middle grades teachers to have a solid grounding in the subjects they will teach.⁶*

Continuing this theme into high school, Cliff Adelman’s detailed analysis of student transcripts led him to conclude that “the impact of a high school curriculum of high academic intensity and quality on degree completion is far more pronounced – and positively – for African-American and Latino students than any other pre-college indicator of academic resources. The impact for African-American and Latino students is also much greater than it is for white students.”⁷

Adelman’s work spawned confirming analyses. An ACT research report released earlier this month shows “the clear relationship between the rigor of the high school coursework students take and their readiness for college and the workplace. Simply put, the more rigorous and challenging those courses, the more likely it is students will be ready for college and will earn their degrees. Our research also confirms that taking and doing well in specific courses—such as Biology, Chemistry, Physics, and upper level mathematics (beyond Algebra II)—has a startling effect on student performance and college readiness. In view of the strong relationship between course-taking patterns and college readiness, we are recommending that every student take specific courses in high school. We’re confident that, after reading this report, you will agree with us that we urgently need a more well-defined core curriculum. As a nation, we can’t afford the costs of continuing to graduate high school students who are unprepared for postsecondary education and work.”⁸

Additional specific guidance in improving high school curricular offerings in English and mathematics is offered by the American Diploma Project (ADP), a joint effort of Achieve, Inc., The Education Trust, and the Thomas B. Fordham Foundation. ADP has developed “a set of benchmarks that describe the specific English and mathematics knowledge and skills that graduates must have mastered if they expect to succeed in postsecondary education or in high-performance, high-growth jobs.”⁹

The Pathways to College Network recently completed an extensive review of the research literature on college preparation and success with a special emphasis on underserved students. Their synthesis of the research produced six general principles and five recommended actions to guide leaders’ efforts to improve college access and success:

1. *Expect that all underserved students are capable of being prepared to enroll and succeed in college.*
2. *Provide a range of high-quality college-preparatory tools for underserved students and their families.*
3. *Embrace social, cultural, and learning-style differences in developing learning environments and activities for underserved students.*
4. *Involve leaders at all levels in establishing policies, programs and practices that facilitate student transitions toward postsecondary education.*
5. *Maintain sufficient financial and human resources to enable underserved students to prepare for, enroll, and succeed in college.*
6. *Assess policy, program, practice, and institutional effectiveness regularly.*

These principles underpin a series of recommended actions . . . :

- *State and federal officials must mandate rigorous, aligned curricula for schools and provide sufficient funding for programs, teachers, and students.*
- *School leaders should require a college-preparatory curriculum for all students, provide academic and social support for underserved students, and ensure that teachers are well prepared to address different learning styles and cultural backgrounds.*
- *College and university leaders need to be clear about the skill and knowledge they expect incoming freshmen to have. . .*
- *Outreach program leaders must provide academic and social support for underserved students and their families, including tutoring, parent involvement, and partnership initiatives.*
- *Community leaders and family support groups should work with students and families to instill and reinforce beliefs that all students must prepare for postsecondary education. In turn, communities and families must push schools and government to adopt a goal of universal college-readiness and achievement.¹⁰*

The Pathways to College Network emphasis on underserved students – those first in their families to go to college, low-income students, underrepresented minorities, students with disabilities – reflects the nation’s need to ensure that all students are successfully prepared to shoulder the demands of democratic citizenship and economic productivity in a 21st century environment.

There is no silver bullet in this arena. It will take a multi-pronged effort over many years to effect the transformation that is needed. A recent State Higher Education Executive Officers (SHEEO) report outlines major initiatives that, taken together, hold promise. They include:

- **Early outreach programs.** Maturing well beyond early efforts to distribute information, these programs now emphasize mentoring, academic and social support, cultural sensitivity, peer support, and financial assistance to encourage and support the success of student groups that have been left behind in the past.
- **High Quality Teaching.** Research showing that the quality of teaching is the most important factor in increasing student learning is now widely accepted. States can do a lot to assist in the creation and support of high quality teachers, including: sponsoring efforts to get arts and sciences faculty, education faculty, and practicing teachers together to define standards for new teachers; aligning policies and practices with new standards; insisting on solid subject matter preparation; funding rigorous apprenticeship experiences; and encouraging greater use of technology and data.
- **Curriculum and Assessment Systems.** A number of states have moved to: make the college preparatory curriculum the “default” curriculum rather than the “honors” curriculum; base scholarship aid on high school curricular choices; forge agreements between secondary schools and colleges about the requirements for college-level study; align high school exit exams with college entrance exams; and implemented end-of-course assessments to promote rigor across classrooms.
- **Student Financial Assistance.** In addition to removing economic barriers to college attendance, states are using student assistance to motivate and reward academic achievement, to encourage able students to enroll in state institutions, and to encourage stronger academic preparation for college.
- **Data and Accountability Systems.** Exemplary state data and accountability systems support standards for K-12 achievement that align with standards required for admission and success in postsecondary education; track performance of individual students in ways that permit individual learning diagnoses as well as assessment of institutional and statewide performance; and build an environment in which data and analysis are the bedrock of improvement.¹¹

Additional resources will also be needed – as much as 12% more at the K-12 level according to one estimate.

This expenditure would both expand education resources, making education services available to more people, and boost the education attainment of students. In fact, extended opportunities for early childhood education, combined with smaller classes in 11th and 12th grade and the possibility of dual-credit enrollment, a longer school year and more professional development, would likely result in dramatically higher levels of performance, less time required to graduate from high school and college, increased enrollment in postsecondary education, and a variety of other benefits that could improve the efficiency of the education system.¹²

Commentary. Local leaders working within strong local control traditions (like Colorado) are quick to denounce any move that smacks of increased state control. In local control states, state leaders must find a balance between respecting the benefits of local control and seeking statewide improvements in student achievement. On the issue of high school graduation requirements, the balance suggested is setting a minimal level (and thus raising the floor for some school districts) and a recommended level (that provides local district leaders with a clear target to meet or exceed).

The Pathways to College Network’s focus embraces a special interest of the Commission that undocumented students be treated similarly to in-state residents for the purposes of college admissions, attendance, and financial support. The Commission’s special interest in the fair treatment of undocumented students moves it into a controversial area. Many observers view a public investment in undocumented students as a positive policy leading to gains in human capital. Others contend that lawbreakers should not be rewarded and fear that subsidies to this population will reduce support to native students or add to taxpayers’ costs. In Colorado, a 2002 poll by the Rocky Mountain News reported that only 31% of Coloradoans favored providing in-state tuition for illegal aliens.¹³

Recent research clearly supports the power of high expectations in raising student achievement. But this is easier said than done. Decision makers (typically white males over 40) came through a system geared to sorting opportunity according to position in society and demonstrated talent. They understand this system and know how to make it work for themselves and their children. It is not intuitively obvious to them that our nation’s best interests are served by discarding the sorting mechanism and replacing it with support programs geared to the success of every student. On the contrary, opening the doors of opportunity can be seen as threatening to those who have prospered under the selectively open door of the sorting system.

Patient, committed leadership will be required to shift the education system so it truly supports success for all students. One group working in this direction – Standards for Success – has focused on two goals: (1) identify what students need to know and be able to do in order to succeed in entry-level university courses; and (2) produce a database of information on state high school assessments to improve the connection between the content of high school tests and the standards for university.¹⁴ Their work might be useful to Colorado leaders.

Principle #3. Policy decisions should be data-driven based on a comprehensive, standardized, timely, accurate, and open education database that follows individual students from entry into public education through participation in the workforce.

Recurring Themes in Relevant Research. Standards-based education systems benefit from sophisticated data support systems based on individual performance cumulated over time. After examining state data efforts across the country in both K-12 and postsecondary education, two researchers commissioned by a national nonprofit came to this conclusion:

“Data systems designed for the new century will need to provide a comprehensive foundation for documenting the achievement of students, schools, and colleges, while improving the ability to respond to questions about a state’s investment in education. . . Effective and comprehensive systems share several common characteristics. They inform all stakeholders of the condition of education at various levels. They enable states to identify effective educational practices and diagnose problems. They have the potential to increase the commitment among stakeholders to collect, analyze, and use information on student performance. Effective systems also have the ability to identify programs, schools, and students that are successful, in addition to those that need attention and assistance to become more successful. Finally, such systems help K-12 students and teachers focus on the curricula and content that must be mastered to be successful in postsecondary education.”¹⁵

The authors go on to note that, as of 2002, K-12 systems in 22 states are using an individual student-level record system and 15 more are designing such systems. This movement has been reinforced by the requirements of the federal No Child Left Behind Act that requires that all students be included in a state’s accountability system. At the postsecondary level, 39 states currently collect data based on individual student records (known as unit record databases).

Although much data is already available, major data problems remain in building unit record systems capable of tracking students across multiple levels of education and through a variety of geographical locations, including the nature and definitions of data collected, timing of data collection, nature of student identifiers and, particularly between high school and college, linking databases. Florida is a leader among the many states working to resolve these issues. Florida’s K-20 data warehouse is designed to support its efforts to create a K-20 system. *“The mission of the Florida Education Data Warehouse (EDW) is to provide stakeholders in public education – including, but not limited to, administrators, educators, parents, students, state leadership, and professional organizations – with the capability of receiving timely, efficient, consistent responses to inquiries into Florida’s Kindergarten through University education system.”¹⁶*

Commentary. Having accurate, timely data is good. Using data is better. The Commission has an opportunity to model the kinds of behavior it would like to see political leaders, state agencies, school districts, and colleges employ when addressing difficult education issues.

Commission members might steal a page from The Education Trust’s book. The EdTrust is especially good at using data to make the case for school improvement. Most of their work focuses on national data trends but, with some effort, their approach could be adapted to Colorado and reported in the Commission’s 2005 report. One of their best pieces is directly relevant to the Commission’s work: “Youth at the Crossroads: Facing High School and Beyond” was done for the National Commission on the High School Senior Year.¹⁷ Another EdTrust data source is their “Education Watch 2004” database that provides state-by-state summaries of students’ educational achievement and opportunity.¹⁸

One data issue that has already been raised by the Committee is Colorado’s need for a fair and accurate way to calculate graduation rates among districts including the cumulative rate of passing through the various grades. This is an important issue that might provide an opening for the larger discussion of how to develop a P-16 database to support student achievement.

Conclusion. These principles – and, I expect, others under development by other Commission committees – are interrelated. This is a major reason for viewing each piece within a P-16 framework. A P-16 framework pushes transition and collaboration issues to the top of the student achievement agenda and brings old players together in new ways to work out solutions that are in the best interests of all Colorado students.¹⁹

The Commission could stake out a leadership position in Colorado by adopting a P-16 framework for its work on improving the high school experience. Follow-up work extending the P-16 framework to early learning issues and achievement in the lower grades would seem to make a natural agenda for the Colorado Children’s Campaign.

End Notes

¹ This paper builds on recent conversations of the Colorado Commission for High School Improvement's sub-committee on transitions to and from high school. It is designed to stimulate dialogue among Commission members as well as summarize important research on student transitions and performance.

² The Education Trust. "Youth at the Crossroads: Facing High School and Beyond". Vol. 5, Issue 1 of "Thinking K-16", Winter 2001. Available on the web at http://www2.edtrust.org/NR/rdonlyres/85897615-327E-4269-939A-4E14B96861BB/0/k16_winter01.pdf.

³ Carl Krueger, Terese Rainwater, and Spud Van de Water. "The Case for P-16: Designing an Integrated Learning System, Preschool Through Postsecondary Education." Denver: Education Commission of the States. 2002. Available on the web at <http://www.ecs.org/ecsmain.asp?page=/search/default.asp>.

⁴ National Commission on the High School Senior Year. "Raising Our Sights: No High School Senior Left Behind". Princeton, NJ: The Woodrow Wilson National Fellowship Foundation. 2001. Available on the web at http://www.woodrow.org/CommissionOnTheSeniorYear/Report/FINAL_PDF_REPORT.pdf.

⁵ Michael Kirst and Andrea Venezia. "The Bridge Project: Executive Summary." Stanford University. 2003. Available on the web at <http://www.stanford.edu/group/bridgeproject/execsummary.html>.

⁶ Gene Bottoms, Sondra Cooney and Kathleen Carpenter. "Improving the Middle Grades: Actions That Can Be Taken Now". SREB. Atlanta. 2003. This is part of an extensive series on improving middle schools that can be found on the web at <http://www.sreb.org/programs/MiddleGrades/MiddleGradesindex.asp>.

⁷ Clifford Adelman. "Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment". Office of Educational Research and Improvement, U.S. Department of Education. 1999. Available on the web at http://www.eric.ed.gov/ERICWebPortal/Home.portal?_nfpb=true&_pageLabel=ERICSearchResult&newSearch=true.

⁸ ACT, "Crisis at the Core: Preparing all Students for College and Work". 2004. Available on the web at <http://www.act.org/news/releases/2004/10-14-04.html>.

⁹ The American Diploma Project, "Ready or Not: Creating a High School Diploma That Counts". Washington, D.C. 2003. Available on the web at <http://www.achieve.org/achieve.nsf/AmericanDiplomaProject?OpenForm>.

¹⁰ Pathways to College Network. "A Shared Agenda: A Leadership Challenge to Improve College Access and Success". 2004. The Network is a broad coalition of 21 national organizations supported by 13 major funders (including the Daniels Fund in Colorado). Their report is available on the web at <http://www.pathwaystocollege.net/agenda/index.html>.

¹¹ State Higher Education Executive Officers. "Student Success: Statewide P-16 Systems". Order from SHEEO, 700 Broadway, Suite 1200, Denver, CO 80203.

¹² John Augenblick and Josiah Pettersen, "Estimated Costs of Organizing a P-16 Education System." Education Commission of the States. 2001. Available on the web at <http://www.ecs.org/html/IssueSection.asp?issueid=76&s=Other>.

¹³ For more on this issue see the National Conference of State Legislatures' 2003 Policy Brief "Tuition and Unauthorized Immigrant Students" available on the web at <http://www.ncsl.org/programs/immig/tuition2003.htm>. See also the American Association of State Colleges and Universities' Special Report, "Debating In-State Tuition for Undocumented Alien Students", available on the web at http://www.aascu.org/special_report/access_for_all.htm#co.

¹⁴ Association of American Universities, "Standards for Success". Available on the web at <http://www.s4s.org/>.

¹⁵ Hans P. L'Orange and Richard A. Voorhees, "Data and Accountability Systems" in *Student Success: Statewide P-16 Systems*. State Higher Education Executive Officers (SHEEO). Denver. 2003. Order from SHEEO, 700 Broadway, Suite 1200, Denver, CO 80203.

¹⁶ For more information visit the Florida Education Data Warehouse site at <http://edwapp.doe.state.fl.us/doe/>.

¹⁷ Download a free copy <http://www2.edtrust.org/edtrust/product+catalog/reports+and+publications.htm>.

¹⁸ For Colorado's summary go to <http://www2.edtrust.org/edtrust/summaries2004/Colorado.pdf>.

¹⁹ For an overview of P-16 systems, see Spud Van de Water and Terese Rainwater, "What is P-16 Education? A Practical Introduction to the Concept, Language and Policy Issues of an Integrated System of Public Education". Education Commission of the States. Denver. 2001. Available on the web at <http://www.ecs.org/html/Document.asp?chouseid=2428>.