



K-20 Education Pipeline Common Problems

Prepared for the Blackboard Institute

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The Third Mile Group has compiled this summary brief to assist the Blackboard Institute in the development of its new Pipeline Matters project. This presentation of common problems, issues and concerns in the education pipeline will contribute to the Institute's thorough examination of the education pipeline, and will complement the research and organizational bibliography (see, K-20 Education Pipeline Bibliography), list of resources, and potential partners, and help produce a Wiki tool for organizations, states and the general public. The issues presented in this brief have been drawn from the literature cited in the bibliography that will help the Institute's stakeholders create a common understanding and language on the issues students face in navigating the public education system. Ultimately, these products will direct the Institute to a set of actions, strategies and possible solutions that states can employ to reduce pipeline barriers and foster smooth transitions for all students. All of the resources, studies and reports cited in this brief are contained in the K-20 Education Bibliography. The list is not exhaustive, but rather is intended to be a starting point in determining the areas and junctures of the education pipeline that need attention. Please submit any additional entries to: Garen Singer at Garen.Singer@blackboard.com.

Common Problems and Barriers Related to the Educational Pipeline

The following issues, problems and concerns related to the public education pipeline are categorized according to several broad-based categories as presented in the K-20 Education Pipeline Bibliography. These areas cover every level of the pipeline; these issues, problems and concerns can be found in every grade and at every transition point in the pipeline. The last two categories in this document, Impacts and Consequences and Possible Solutions and Strategies, are more specific to this summary brief and serve as placeholders for the Institute's objective to begin to investigate and devise solutions to the barriers and problems of transitioning through the education pipeline.

1. Education Pipeline "Leaks" – System Problems and Their Potential Causes

Alignment, transitions, costs, gateway courses and content, college access, college support, culture, teacher quality, pedagogy, time and structure, system accountability

- **Alignment.** This issue refers to the three different levels of education: pre-K (preschool through kindergarten), K-12 and postsecondary. The three levels act as independent systems, with different policies and structures around governance, standards, accountability, and cultures. These differences make it very difficult for educators and administrators to communicate between the systems. Consequently, reform initiatives are difficult to implement because the "rules" in each system vary widely. (See, The Bridge

Project; Pathways to College; Van de Water and Rainwater, ECS; *More Student Success*, SHEEO.)

- **Transitions.** From a student perspective, the transitions from one system of education to another (and even from grade to grade) are difficult, and particularly so for low-income and/or at-risk students who are unfamiliar with the system. Transitions are made difficult by a number of factors: unclear expectations, entrance exams, costs to move into the next level, application requirements, new emotional and social supports needed, and course requirements that were not made clear to the student and his/her family. Especially difficult transitions for students are from middle school to high school and from high school to college. (See, Pathways to College, *Shared Agenda*; The Bridge Project).
- **Costs.** The transition from high school to college is an expensive one. Students and families must bear the cost of college application fees, financial aid forms, exam fees, tutoring fees for exams, plus the time invested in completing the needed applications and learning to navigate the system. According to The Bridge Project at Stanford University, “This situation is particularly troubling for traditionally underrepresented and economically disadvantaged students because they often do not have family members who are familiar with higher education, and often lack the resources needed to hire private counselors and tutors to help them successfully navigate the K-16 transition.” “There are often sufficient financial and human resources needed to enable underserved students to prepare for, enroll, and succeed in college.” (See, Pathways to College, *A Shared Agenda*.)
- **Key Gateway Courses and Content.** In order to matriculate to higher education, high school students need to successfully complete many “gateway” courses that cover required content (for example, 8th grade algebra). Often times, however, students do not find out about these gateway courses until it is too late in their high school career to take the required courses.
- **College Access:** Cost is typically cited as the most common barrier to college. In addition, however, the Pathways to College network has identified five *categories* of barriers to access: emotional, instrumental, informational, appraisal, and structural (Pathways, *Removing Roadblocks to Rigor*). These categories reflect the importance of creating a college-going culture in K-12 schools, starting early in the middle grades and before.
- **College Support:** Once a student successfully enrolls in college, many transitional barriers still must be overcome. The Pathways to College project suggests that schools “provide a range of high-quality college-preparatory tools [support, mentoring, tutoring] for underserved students and their families; embrace social, cultural, and learning-style differences in developing learning environments and activities for underserved students; and involve leaders at all levels in establishing policies, programs, and practices that facilitate student transitions towards postsecondary attainment.” (See, Pathways to College, *A Shared Agenda*.)
- **Creating a College-Going/Workforce-Going Culture.** Establishment of an academic

culture and expectations for students is critically important in schools. Research indicates that there is an “expectations gap” among educators in which adults “expect” certain students to attend college, but have lower expectations for other students. This expectation gap translates into a lack of information and support to students who are capable of going to college but may not fit the “standard” profile of a college attendee. (See, ACT, *Crisis at the Core*; Achieve, *Closing the Expectations Gap*; Engle and O’Brien, *Demography Is Not Destiny*.)

- **Teacher and Leader Quality and Depth of Content.** Educator quality is a huge issue and one that influences many other education concerns – including the education pipeline. Without high quality teachers and school leaders, the different education systems will not be able to close the expectations gap or produce students proficient in gateway skills. Well-trained teachers – and the high-quality leaders that support them – are able to create a positive and supportive school culture that engages students in a love of learning that will take them through K-12 and into postsecondary education and/or the workforce.
- **Pedagogy.** The way in which students are taught is very important. As the 21st century challenges educators with new technologies, new skills and ways to apply content are needed. Each education level must be up to date with research-based methods to effectively impart knowledge and engage students. The *Tough Choice, Tough Times* report suggests that most of the future jobs in the U.S. will be “creative” and “knowledge creation” jobs, which require much different skills than 20th century industrial jobs. (See, National Center on Education and the Economy.)
- **Time and Structure of Schools, Classes and Universities.** It has been said that if you walk into a K-12 or university classroom today, it will look just as it did 100 years ago. While that may not entirely be the case, education systems do need to re-evaluate how they structure time and the classroom, allowing for team teaching, collaborative planning time, more time on task for some students and different, adaptive environments where students can learn.
- **System Accountability.** Each education system operates under different accountability policies and mechanisms that are both effective but could also be improved. Beyond the different policies and mechanisms, however, is the need for the different *systems* to be aligned so that they mutually reinforce the success and high performance of the others. Pre-K, K-12 and higher education systems need to develop a joint accountability structure that allows for accurate assessment and continuous improvement throughout the entire pipeline. (See, *Pathways to College, A Shared Agenda*.)

2. The Outcomes We Want

Standards, skills, definition of readiness, and defining the outcome

- **Standards:** A high college course remediation rate is just one data point that suggests a disjuncture between K-12 and higher education standards. However, remediation statistics is not the only indicator. Each state has developed or is in the process of crafting its own version of K-12 learning standards, which very often are different from college

admissions criteria. The Bridge Project points out that, in the southeastern U.S. alone, “there are nearly 125 combinations of 75 different placement tests, oftentimes devised by university departments without enough regard to secondary school standards.” We need to outline what students should know and be able to do at each and every juncture of the system, and those standards should build directly on each other and link successfully to the next level of learning. U.S. Secretary of Education Arne Duncan captured this concern in a May 29, 2009 speech:

We want to raise the bar dramatically in terms of higher standards. What we have had as a country, I'm convinced, is what we call a “race to the bottom.” We have 50 different standards, 50 different goal posts. And, due to political pressure, those have been dumbed down. We want to fundamentally reverse that. We want common, career-ready, internationally benchmarked standards.... When children are told that they are “meeting a state standard,” the logical assumption is to think they are ‘on-track’ to be successful. But, because these standards have been dummed down and lowered so much in so many places, when children are “meeting the state standard” they are, in fact, barely able to graduate from high school. And, they are absolutely inadequately prepared to go to a competitive college, let alone graduate from college.

- **Readiness Defined/Skills Needed.** A common education mantra these days is we need to prepare all students to be “workforce ready.” However, similar to the standards issue discussed above, there is no common definition of what “workforce ready” is. Nor is there necessarily alignment between K-12 standards and workforce ready definitions in the states. As *Education Week* recently noted, being “workforce ready” is still elusive (Diploma’s Count, June 11, 2009). The same difficulty with definitions comes up when addressing standards, graduation rates, proficiency, and 21st century skills.
- **Defining the End Game.** The pipeline issue comes down to this question: What is the desired outcome of the system? What do we want students to be, to know? Is postsecondary education for all students a desirable outcome? Once the goal is defined, then, what are the acceptable pathways to that outcome and how do systems ensure those paths are clear for students to navigate? What about the ability to go into the workforce? Is attainment of a GED an acceptable path? State policymakers and educators – and each system – need to agree on the desired outcomes for students, as well as the pathways to get there. (See NCEE report, *Tough Choices, Tough Times*, NCEE, for ideas on the new “end game.”)

3. Measuring Performance and Making System Adjustments

Data systems, assessments, early warning systems

- **Data Systems.** As noted in the American Recovery and Reinvestment Act of 2009 guidelines, as well as the Race to the Top federal grant competition, states should have a coherent and comprehensive data system that tracks students and their progress from when they enter the education system through their postsecondary career – i.e., throughout the education pipeline. The U.S Department of Education requires states to report on implementation of a system that provides greater clarity to parents about the

quality of their child’s education. The data system should have the capacity to provide real-time information on student assessment and other information on achievement to teachers and administrators. (ECS, *ARRA brief*) Though states are making progress on this front, many of these systems are still disjointed or ineffective, or, in some states, non-existent. (See, Data Quality Campaign website.)

- **Assessments.** In order to have meaningful data to track progress and make instructional decisions to improve learning, assessment systems at all levels need to be of high quality, sound measurement and aligned with the state’s agreed-upon P-16 standards. There is debate about whether current K-12 assessment systems accurately measure what students know and whether they are ready to move forward. In many states, first-year postsecondary students are administered a barrage of placement exams, and their poor scores puts them into remediation courses. As the Bridge Project points out, “a lack of compatibility between assessment mechanisms could be a major problem for students who attend high schools that stress performance assessments, portfolios, and problem solving. When those students enter college, they are often faced with more traditional forms of teaching and learning such as standardized multiple choice tests and lectures.”
- **Tracking Early Warning Signs.** Data systems are needed that monitor certain academic and social indicators that can alert educators when a student is off track (and thus on track to possibly dropping out). Ideally the system warnings would link to an appropriate student intervention and/or extra support to get the student back on track. Research indicates that schools can successfully identify 72% of dropouts based on whether they are “on track” regarding course taking and passing rates. (“On track” means by the end of 9th grade a student has accumulated enough course credits to earn promotion to 10th grade while receiving no more than one F.) According to the National High School Center, we can identify 59% of dropouts based on how many absences have occurred for the year. (See, Allensworth and Easton, *Approaches to Dropout Prevention*). Therefore, early-warning data systems should be designed in conjunction with existing data and reporting systems and use accurate data to help assess problems in schools and apply appropriate interventions. A system should be able to track individual student data that allows monitoring students over time and risk factors to be assessed. (See, Craig, *Key Lessons for Building Early Warning Data System*.)

4. Impacts: Consequences of a Poor Performing Pipeline

Graduation, costs, economic impact

- **Graduation.** Educators and local, state and federal policymakers throughout the country are currently fixated on high school completion and graduation rates – and with good reason. Current national estimates suggest that each year, one-third of public high school students fail to graduate from high school. (See, Bridgeland and Dilulio, *The Silent Epidemic*.) To put this in perspective, it is estimated that one high school student drops out of school every nine seconds. By the time you finish reading this policy brief, this nation’s high schools will have lost 100 students. This is cause for alarm in our country, for social, economic and civic reasons and, indeed, for moral reasons as well. As all educators know, high school dropouts are more likely to be unemployed, earn lower wages, be involved in criminal activity, have greater needs for public assistance, be single

parents, and have children at a younger age. Approximately 75% of state prison inmates and 59% of federal inmates are dropouts. And the economic ramifications are just as stark: raising high school completion rates one percent for all men ages 20-60 would save the U.S. \$1.4 billion annually in crime-related costs. (See U.S. Bureau of Justice, *Correctional Problems in the United States*.) This grim reality shows that this is not a problem just for those who drop out, but for all who live, work and raise families in our country. (See, also, Swanson, *Closing the Graduation Gap*.)

- **Remediation.** The lack of alignment between K-12 and higher education policies and practices causes many problems. For example, in 1995, nearly all U.S. public two-year institutions and 81% of public four-year institutions offered remedial courses; in the fall of 1995, 29% of the nation's first-time college students enrolled in at least one remedial reading, writing, or mathematics course. Community colleges across the country are having to increase their developmental education course offerings, which is an expense for both the college and the students needing the courses. (See, The Bridge Project.)
- **Economic Impact.** This excerpt from the McKinsey & Company's Social Sector Report, *The Economic Impact of Achievement Gap in America's Schools*, best sums up the ramifications of not solving the education pipeline problems:

If the United States had in recent years closed the gap between its educational achievement levels and those of better-performing nations such as Finland and Korea, GDP in 2008 could have been \$1.3 trillion to \$2.3 trillion higher. This represents 9 to 16 percent of GDP. If the gap between black and Latino student performance and white student performance had been similarly narrowed, GDP in 2008 would have been between \$310 billion and \$525 billion higher, or 2 to 4 percent of GDP. The magnitude of this impact will rise in the years ahead as demographic shifts result in blacks and Latinos becoming a larger proportion of the population and workforce. If the gap between low-income students and the rest had been similarly narrowed, GDP in 2008 would have been \$400 billion to \$670 billion higher, or 3 to 5 percent of GDP. If the gap between America's low-performing states and the rest had been similarly narrowed, GDP in 2008 would have been \$425 billion to \$700 billion higher, or 3 to 5 percent of GDP. Put differently, the persistence of these educational achievement gaps imposes on the United States the economic equivalent of a permanent national recession. The recurring annual economic cost of the international achievement gap is substantially larger than the deep recession the United States is currently experiencing. The annual output cost of the racial, income, and regional or systems achievement gap is larger than the US recession of 1981–82.

- **College Completion Rates:** A recent report from the American Enterprise Institute suggests that dropping out is hardly just a K-12 system problem. The report says that only 60% of students entering college today actually get the degree. And while that might be a national statistic, how well colleges graduate their students varies considerably from state to state. Clearly, there is much room for improvement once students enroll in a postsecondary institution. (See, Hess et al., *Diplomas and Dropouts*.)

5. Solutions & Strategies

This section offers some strategies for improving pipeline issues that have been discussed in the literature. Dual and concurrent enrollment, dropout prevention and increasing college-going rates are three strategies being tried in several schools and districts throughout the country. Many of these efforts are showing signs of success, but more work is needed. Resources and research information related to these strategies are presented below, but the topics themselves will not be discussed in detail in this summary brief.

Dual and Concurrent Enrollment and Early College High Schools

- Hoffman, Nancy. (2005). *Add and Subtract: Dual Enrollment as a State Strategy to Increase Postsecondary Success for Underrepresented students*. Boston, MA: Jobs for the Future.
- Palaich, R., Augenblick, J., Foster, S., Anderson, A., and Rose, D. (2006). *Return on Investment in Early College High Schools*. Denver, CO: Augenblick, Palaich and Associates, Inc.

Community College Access Networks

- Perry, B. (2009, May) Michigan College Access Network, Report from the Governor's Education Summit: Breaking Through Barriers: Building a Michigan Network for College Access and Success. *Michigan Banker*, 21 (5), 14-16.
http://www.michigan.gov/documents/mistudentaid/MiBMay09_cvrstory_279042_7.pdf

Dropout Prevention

- Kennelly, Louise and Monrad, Maggie (2007). *Approaches to Dropout Prevention: Heeding Early Warning Signs With Appropriate Interventions*. Washington, DC: National High School Center.

Creation of Common State Learning Standards

- Beatty, Alexandra (Editor) (2008). *Common Standards for K-12 Education? Considering the Evidence*. Washington, DC: National Academies Press.

Increasing Rigor of Course Work

- Pathways to College Network. (2007). *Academic Rigor At the Heart of College Access and Success*. Boston, MA: Pathways to College Network.

Increasing Access to AP courses

- Dounay, Jennifer (2006). *Advanced Placement*. Denver, CO: Education Commission of the States. <http://www.ecs.org/clearinghouse/67/44/6744.pdf>

Improving GED Production

- Wayman, Jeffrey C. (2001, February). Factors Influencing GED and Diploma Attainment of High School Dropouts. *Education Policy Analysis Archive*, 9 (4).
- Tyler, John H. (2002). *The Economic Benefits of the GED: A Research Synthesis*. Boston, MA: National Center for the Study of Adult Learning and Literacy.

Online Learning

- Cavanaugh, Cathy (2009). *Getting Students More Learning Time Online: Distance*

Education in Support of Expanded Learning Time in K-12 Schools. Center for American Progress. <http://www.americanprogress.org/issues/2009/05/pdf/distancelearning.pdf>

Creation of Scholarship Programs for the Underserved

- The Kalamazoo Promise in Michigan seeks to provide each Kalamazoo Public Schools graduate with the opportunity to attend postsecondary education with up to a 100% tuition scholarship. See, <https://www.kalamazoopromise.com/>.
- Perry, B. (2009, May) Michigan College Access Network, Report from the Governor's Education Summit: Breaking Through Barriers: Building a Michigan Network for College Access and Success. *Michigan Banker*, 21 (5), 14-16. http://www.michigan.gov/documents/mistudentaid/MiBMay09_cvrstory_279042_7.pdf

P-16 Councils/Governing/System Collaboration

- Dounay, Jennifer (2008). *Landmines P-16/P-20 Councils Encounter and How They Can Be Addressed (or Avoided Altogether)*. Denver, CO: Education Commission of the States. <http://www.ecs.org/clearinghouse/78/86/7886.pdf>
- Diplomas Count 2008, School to College: Can State P-16 Councils Ease the Transition? (2008, June 8), *Education Week*, 27 (40). The following states have legislation that requires multiple agencies to work together to try and align the pre-K through higher education systems.
 - Arizona (Executive Order)
 - Arkansas (Legislative statute)
 - Colorado (Executive Order)
 - Delaware (Executive Order and Legislative Statute)
 - Illinois (Legislative statute)
 - Indiana (Legislative statute)
 - Kansas (Executive Order)
 - Louisiana (Executive Order and Legislative Statute)
 - Maine (Executive Order)
 - Maryland (Executive Order)
 - Missouri (Legislative statute)
 - Montana (Board Resolution)
 - Nevada (Legislative statute)
 - New Hampshire (Executive Order)
 - North Carolina (Legislative statute)
 - Ohio (Legislative statute)
 - Oklahoma (Legislative statute)
 - Oregon (Legislative statute)
 - Rhode Island (Executive Order)
 - South Carolina (Legislative statute)
 - Texas (Legislative statute)
 - Utah (Board Resolution)
 - Virginia (Executive Order)
 - Washington (Executive Order)
 - West Virginia (Executive Order)