More Student Success

A Systemic Solution

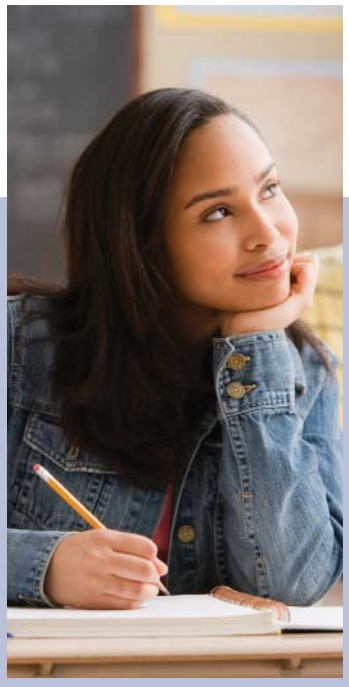
SHEEO

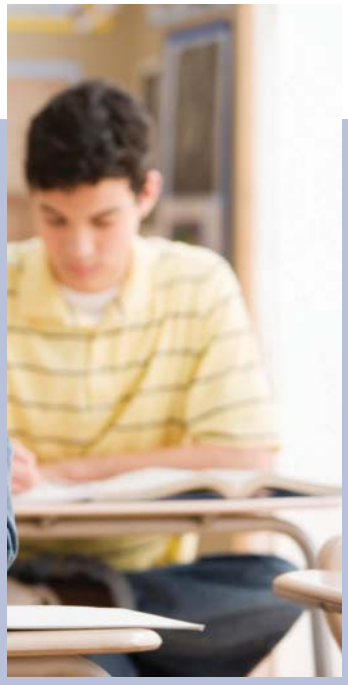
© 2007 State Higher Education Executive Officers

State Higher Education Executive Officers (SHEEO) is a nonprofit, nationwide association of the chief executive officers serving statewide coordinating and governing boards for postsecondary education. The mission of SHEEO is to assist its members and the states in developing and sustaining excellent systems of higher education. SHEEO pursues its mission by: organizing regular professional development meetings for its members and their senior staff; maintaining regular systems of communication among the professional staffs of member agencies; serving as a liaison between the states and the federal government; studying higher education policy issues and state activities and publishing reports to inform the field; and implementing projects to enhance the capacity of the states and SHEEO agencies to improve higher education.

Copies of this report are available from SHEEO. Visit our website at www.sheeo.org/pubs/pubs_search.asp for more information.

More Student Success





A Systemic Solution

SHEEO

Table of Contents

Preface v

Authors' Biographies vii

Executive Summary 1

Early Outreach 13

Curriculum and Assessment Systems 37

High Quality Teaching 55

Student Financial Assistance 71

Success in College 95

Data and Accountability Systems 109

Preface

The American people are preoccupied with education for good reason. Our nation must become better educated in order to thrive and prosper in the knowledge economy of the twenty first century. The federal government, national foundations, and virtually all the states have launched many initiatives to meet this challenge. Good ideas abound. But no single program, no "silver bullet" can increase educational success to the level required. It will take a systemic solution, the coordinated efforts of many people and educational services, all focused on student success.

This book tells how to build a system leading to more student success beginning in elementary school and continuing through high school and postsecondary education. It identifies the key elements, describes effective practices, and shows how they come together to help students and educators succeed. It doesn't describe every detail, or do the work – no single book can do that. But more students will succeed in the states which adopt a systemic strategy, and those states will succeed as well. *More Student Success* has been supported by a grant from the Bill and Melinda Gates Foundation as part of its broad strategy for advancing educational attainment.

More Student Success is an updated and expanded successor to a 2003 SHEEO publication, *Student Success: Statewide P-16 Systems*. The 2003 publication emerged from "case studies" to learn about P-16 practices in five states: California, Louisiana, Maryland, North Carolina, and Rhode Island. Higher education and K-12 leaders from many states, as well as staff from SHEEO, the Pathways to College Project, the Western Interstate Commission on Higher Education (WICHE), the Education Commission of the States (ECS), and the College Board, participated in the case studies to ask challenging questions and learn from each other. *More Student Success* has updated the earlier book to reflect progress since 2003, and it includes a new chapter, by George Kuh, on increasing the rate of student achievement in postsecondary education.

The biographical sketches that follow introduce the authors of the essays, who collectively have accumulated many years of wide-ranging policy experience. While we have different perspectives, we share a passionate belief that only comprehensive, well-integrated state systems can meet the educational needs of the next generation. We have influenced each other, and we have many intellectual debts, especially to those who participated in the project in this and its earlier phases. While acknowledging the many contributions from our colleagues, the authors of each of these essays bear sole responsibility for the views therein.

Paul E. Lingenfelter
President
State Higher Education Executive Officers

Author's Biographies

Sharmila Basu Conger is a policy analyst for the association of State Higher Education Executive Officers (SHEEO). She is responsible for supporting the P-16 Professional Development Collaborative, which provides in-service professional training to K-12 educators, and participating in SHEEO policy studies and initiatives involving student access and success, accountability, knowledge resources, and teacher quality. Prior to joining SHEEO, Conger completed a three-year internship in Technology and Communications Policy for the Western Cooperative for Educational Telecommunications (WCET) at the Western Interstate Commission on Higher Education (WICHE) where she examined venues for accreditation of Web-based courses and investigating barriers to adoption of online education. She received a master's degree and Ph.D. in Human Genetics from the University of Michigan, Ann Arbor, and a B.A. in Biology from Cornell University.

Cheryl D. Blanco is Vice President for Lifelong Learning Policy and Research at the Council for Adult and Experiential Learning (CAEL). She oversees CAEL's higher education policy and research initiatives, as well as the organization's relationships with foundations and policymakers generally. Prior to this position, Blanco was senior program director for policy analysis and research at the Western Interstate Commission for Higher Education (WICHE) where she monitored historical and emerging social, economic, and political trends that impact higher education; directed the work of several policy projects; and produced a variety of publications to improve policymaking in higher education. She was appointed by former Secretary of Education Richard Riley to the Advisory Council on Education Statistics for the National Center for Education Statistics (NCES). Before joining the WICHE staff, Blanco was the educational policy director at the Florida Postsecondary Education Planning Commission. She has held multiple positions at Arecibo Technological University College, University of Puerto Rico, including assistant to the vice president for academic affairs, director of the division of continuing education, coordinator for professional development, and tenured associate professor in the English Department. She received her Ph.D. in Higher Education from Florida State University.

Ed Crowe is a consultant on teacher quality reform, K-16 policy, and higher education information systems and strategic planning. He was the first director of the federal Title II Grants Program, and now works with the Carnegie Corporation, the NYC Partnership for Teacher Excellence, the Hunter Foundation of Scotland, the Committee on Teacher Preparation of the National Research Council, and the National Commission on Teaching and America's Future. Since 2001, Crowe has worked on projects related to teacher quality policy for the State Higher Education Executive Officers (SHEEO), with the public higher education systems of Ohio, Pennsylvania, and Wisconsin, for the American

Association of State Colleges and Universities, and with the Texas-based Center for Research, Evaluation and Advancement of Teacher Education. He is a graduate of Boston College and holds Masters and Doctoral degrees in Political Science from UNC-Chapel Hill.

George Kuh is the Chancellor's Professor of Higher Education at Indiana University, and Director of the Indiana University Center for Postsecondary Research, where he teaches in the graduate programs in higher education and student affairs administration. Among the Center initiatives he directs are the National Survey of Student Engagement (NSSE) and related surveys for faculty and law school students, the NSSE Institute for Effective Educational Practice, and the College Student Experience Questionnaire Research Program. Past-president of the Association for the Study of Higher Education, he has over 300 publications including 20 books and monographs. In addition, he has consulted with 185 institutions of higher education and educational agencies in the United States and abroad, and received awards from national organizations for his academic leadership and contributions to the literature as well as the prestigious Tracy Sonneborn Award from Indiana University for a distinguished record of scholarship and teaching. Kuh's research interests include assessing student and institutional performance to enhance student success and improving the quality of the undergraduate experience. He holds a Ph.D. in Counselor education from the University of Iowa, an M.S. in Counseling from St. Cloud State College, and a B.A. in English from Luther College.

Paul E. Lingenfelter is President of the association of State Higher Education Executive Officers (SHEEO); his work has focused on successful participation in higher education, accountability, and finance. Under his leadership, SHEEO organized and staffed the National Commission on Accountability in Higher Education, which in March 2005 issued its report, *Accountability for Better Results: A National Imperative for Higher Education*. He previously served as Vice President of the John D. and Catherine T. MacArthur Foundation, where he established and led the MacArthur Foundation Program on Human and Community Development. Earlier, Lingenfelter served as Deputy Director for Fiscal Affairs for the Illinois Board of Higher Education. He received a Ph.D. from the University of Michigan in higher education, an M.A. from Michigan State University, and an A.B. from Wheaton College in literature.

David A. Longanecker is the Executive Director of the Western Interstate Commission for Higher Education (WICHE). Previously he served for six years as the assistant secretary for postsecondary education at the U.S. Department of Education, developing and implementing national policy and programs that provided more than $40 billion annually in student aid and $1 billion to institutions. Prior to that he was the state higher education executive officer (SHEEO) in Colorado and Minnesota. He has also served as the principal analyst for higher education for the Congressional Budget Office. Longanecker has served on numerous boards and commissions and has written extensively on a range of higher education issues. His primary interests in higher education are: access and equity; promoting student and institutional performance; finance; the efficient use of educational technologies; and internationalizing American higher education. He holds an Ed.D. from Stanford University, an M.A. in Student Personnel work from the George Washington University, and a B.A. in Sociology from Washington State University.

Hans P. L'Orange is Vice President for Research and Information Resources and Director of the SHEEO/NCES Network for the association of State Higher Education Executive Officers (SHEEO). The Network is a collaborative project administered by SHEEO and funded by the National Center for Education Statistics (NCES) at the U.S. Department of Education. L'Orange serves as a liaison to foster communication, coop-

eration, and collaboration between the federal government, state higher education agencies, and national associations on issues related to data collection, data management, and information dissemination. His primary areas of interest and responsibility are developing effective strategies for data management; the relationships between data, information, and knowledge; and using knowledge resources effectively in shaping public postsecondary education policy. Previously, L'Orange was the Associate Director for Institutional Analysis at the University of Colorado at Boulder. He received his M.S. degree in Business Information Systems with a minor in Organizational Development from the University of Colorado and a B.A. degree from Colorado State University.

Terese Rainwater is the program director of the State Scholars Initiative, a federally funded program designed to encourage high school students to take a rigorous core curriculum, at the Western Interstate Commission for Higher Education (WICHE). Prior to joining WICHE, she worked at the Education Commission of the States and served as the project manager of The National Collaborative for Postsecondary Education Policy. Rainwater was the managing editor for *Child Development Abstracts & Bibliography* and a research fellow at the Kansas State Legislature. She received her master's degree and Ph.D. in Postsecondary Education Administration and the Foundations of Education from the University of Kansas, and a Bachelor's degree in Government from the College of Saint Benedict.

Christine Tell is a Senior Associate in Alignment at Achieve, Inc. Her primary responsibility is to work with states on policies and practices that support the alignment of K–12 and postsecondary systems and the workplace, including standards, assessments, data systems and graduation requirements. Prior to joining Achieve, Tell was director of the Proficiency-Based Admission Standards System (PASS) for the Chancellor's Office of the Oregon University System. Her study, *The First Year: Student Performance on High School Benchmarks and Subsequent Performance in the First Year of College*, examines effects of Oregon's statewide alignment. Before her work at the Oregon University System, Tell served as director of the Oregon LEAD Project, where she was responsible for professional development and leadership activities for the Confederation of Oregon School Administrators. During this time, Tell also served as a policy consultant to the Oregon Department of Education and developed the state's Goals 2000 plan. Tell has more than 15 years of classroom teaching experience, including work at the elementary, middle and high school levels as well as performing the challenging role of middle school assistant principal. Tell received a Master's degree in Special Education and a Doctorate in Curriculum, Instruction, and Assessment from the University of Oregon, and a Bachelor's degree in American Studies from the University of Virginia, Mary Washington College.

Andrea Venezia is Senior Policy Analyst at WestEd. She focuses on education policy research and analysis, particularly as related to student access to readiness for postsecondary education and connections between high schools and college. She served on the staff of the National Center for Public Policy and Higher Education (NCPPHE); directed Stanford University's Bridge Project; and worked in research and policy positions at the state and federal levels, including the Texas Higher Education Coordinating Board and the National Education Goals Panel. Venezia received a Ph.D. in Public Policy from the Lyndon B. Johnson School of Public Affairs at the University of Texas, Austin, a Master's in Administration and Policy Analysis in Higher Education from Stanford University, and a Bachelor's degree in English from Pomona College.

Acknowledgements:
Editorial Assistance: Joslyn Green, Gloria A. Bein
Design: Susan B. Winter

Executive Summary

By Paul Lingenfelter

The educational aspirations of Americans have never been higher, and they continue to grow.

According to a 2002 survey by the National Center for Educational Statistics, 80 percent of 10th graders say they expect to earn at least a bachelor's degree, and half this group, 40 percent of all students, expect to earn a graduate or professional degree. Of the remaining students, 12 percent expect to get some postsecondary education, including vocational or technical credentials. Only eight percent plan to forgo postsecondary education entirely.

Such aspirations did not emerge spontaneously. They were produced by changes in the world economy and overwhelming evidence that, in the next generation, only those with postsecondary education will be able to get and keep good jobs. Nor is it just workers who have a stake in advanced education: no business or society can compete in the global economy with workers or citizens who lack advanced knowledge and skill.

In effect, the educational system of the twenty-first century is being asked to double the degree production rate of the twentieth century – with no compromise on quality.[1] The enormity of this challenge should not be underestimated. Without dramatic changes in policy and practice, it will not be met.

In response, policymakers and educators across the country have been hard at work. The reauthorization of the Elementary and Secondary Education Act in 2001, renamed *No Child Left Behind*, added powerful rhetoric and ambitious reform initiatives to the national preoccupation with educational reform that has persisted since *A Nation at Risk* appeared in 1983. In the past three years four major national reports have called for improving enrollment, degree completion, and student learning in higher education.[2]

But reports, and even laws, are not action. The necessary work is far from finished. *More Student Success* describes how state and institutional leaders have developed and implemented strategies to help many more students become successful. *More Student Success*, however, is more than a collection of "best practices"; it has a point of view.

We contend that achieving the educational goals of the next generation will require policymakers and educators to view education as an integrated system, from birth through adulthood. Each individual element of an education system must be excellent in its own right, and must interact effec-

tively with other components if students are to learn at the highest possible levels and continue learning throughout their lives. If any part of the system at any level is inadequate or disconnected, the whole system will under-perform.

Although a few states have aligned high school achievement standards with college-level skills, no state has fully developed a well-integrated educational system from birth through postsecondary education, focused relentlessly on student success. A common vision of such a system, a common commitment to the vision, and a venue for collaboration all are essential. While governance and structure matter, shared vision and commitment are far more important than either. States with many different structures have made progress toward integrating and improving their educational systems by focusing on substance, sharing leadership, and developing a working consensus.

At this point, what must be done to build on promising beginnings, sustain momentum, and ensure that most Americans participate and succeed in postsecondary education? These essays suggest answers to that straightforward question.

The essays concern the traditional years of schooling, K-20, and begin by focusing on the middle school years. The term P-20 is used, however, to acknowledge that a supportive early childhood experience and sound elementary education, not addressed here, lay a foundation for later student achievement. That said, most adult Americans for the next quarter century are already well past the pre-school and elementary years. We cannot succeed without focusing on every part of the entire educational system.

More Student Success considers six essential components of a P-20 system designed for student success:

1. Early outreach programs – to encourage parents and students to have high aspirations and learn what is required for postsecondary success;
2. Curriculum and assessment systems – to specify the knowledge and skills that students need and to assess their progress;
3. High quality teaching – to enhance learning at every level of education;
4. Student financial assistance – to enable and encourage postsecondary enrollment;
5. Data and accountability systems – to monitor progress and chart paths for improving achievement; and
6. Postsecondary policies, programs, and practices intentionally *designed* to increase students' chances for success.

More Student Success also explains the interrelationships among these components and argues that educators at every level from pre-school to postsecondary education need to work at common purposes to assure the success of the entire system.

Highlights and recommendations from each of the essays are summarized below.

Early Outreach

Social scientists have long observed that the strongest predictor of participation in higher education is the education of one's parents. Children whose parents have participated in postsecondary education are automatically enrolled in a "program" that, early in life, exposes them to the advantages of higher education and the path to success. Children whose parents have not succeeded in postsecondary education need another way to get this information.

A variety of successful early outreach programs advance this objective. The most successful:

- Focus on individual students, and on what motivates and sustains their learning;
- Engage young people in the context of their own culture and the community of their peers;
- Make clear to young people the importance of postsecondary education to their future, and convince them that, no matter their backgrounds or their parents', it is possible to succeed if they do the right things, take the right courses, and work at their studies;
- Make required academic standards very clear, beginning especially in the middle grades when the courses taken and a student's academic performance create or reduce future opportunities;
- Give students regular feedback on academic strengths and areas needing improvement;
- Provide high quality teaching and coaching to help students improve; and
- Provide convincing assurance (in several states, a guarantee) that the cost of higher education will be within reach if a student takes the right courses and adequately demonstrates that he or she can succeed in college.

Early outreach programs must be well informed about the curriculum required for post-secondary success. They must also provide early information and assurance about affordability, actively involve excellent teachers, and draw on data and accountability systems for supportive diagnostic information.

Our most important observation about early outreach programs, however, is that the special, "add-on" programs that have helped many students are not sufficient. Vast numbers of students require early information and on-going coaching and assistance about postsecondary education. The key components of effective early outreach programs need to be completely embedded in the educational system. Every teacher in every classroom needs to be equipped to provide guidance and support to every student. Every teacher needs to have high expectations for student achievement. And every teacher and counselor needs to have the information and diagnostic resources necessary to help students succeed.

Curriculum and Assessment Systems

For more than twenty years research has made it clear that the courses students take in high school are very important to their success in college. In fact, a rigorous college preparatory curriculum in high school has been a better predictor of college success than test scores or high school grades.

Despite the evidence, many states have not required or encouraged students who aspire to college to take rigorous courses in high school. Also, many colleges have been lax in informing high schools and prospective students that the high school curriculum is crucial to college preparation and success. Even worse, some students have been "steered away" from rigorous courses because of stereotypes about their ability to succeed or because they have had some difficulty in the past. All too often the educational system has taken the expedient route, lowering students' expectations rather than helping students rise to the challenge of greater achievement. In too many cases a shortage of qualified teachers for college preparatory courses has contributed to this problem.

Fortunately, however, the accumulation of knowledge about this issue is beginning to overwhelm complacency and accelerate change. In 2005 a National Education Summit on High Schools, sponsored by Achieve and the National Governor's Association, outlined "An Action Agenda for Improving America's High Schools." The "American high school is obsolete," declared Bill Gates in a keynote speech at the summit, and the Bill and Melinda Gates Foundation, joined by other donors, has provided direct support for reform initiatives in 22 states as well as for organizations that support state policy improvement.

The first item on the "Action Agenda" focused on restoring value to the high school diploma by aligning standards to the requirements for success in work and postsecondary education, upgrading high school coursework, and developing appropriate assessments for college and work readiness. A number of states are making significant progress on this issue. The most promising state efforts have:

- Made the college preparatory curriculum the "default" curriculum rather than the "honors" curriculum for high school graduation;
- Made the college preparatory curriculum a condition of eligibility for basic scholarship assistance or for merit scholarships;
- Forged agreements between K-12 and postsecondary institutions about the requirements for college-level study;
- Clearly aligned high school assessments of student ability with the qualifying examinations used by colleges and universities – particularly in the critical areas of mathematics and English language skills; and
- Incorporated end-of-course assessments to help assure consistent rigor and essential content across classrooms.

Twenty-nine states have joined Achieve's American Diploma Project (ADP) Network, which aims to strengthen high school standards, curricula, assessments, and data and accountability systems. Twenty-four states (16 of which are also ADP states) are participating in the State Scholars Initiative, a partnership between business and states to motivate high school students to take a rigorous curriculum. The California State University system developed, in collaboration with K-12 leaders, an Early Assessment Program that builds on existing high school assessments to help students close any gaps in their preparation for college work while in high school. Nine states are collaborating to develop and use a common Algebra II exam to improve instruction and give students a valid indicator of their preparation for additional work in mathematics. Other states and assessment organizations are working to design and implement end-of-course exams and other assessments to assure that students aspire to meaningful learning standards and that teachers provide the necessary instructional support. These efforts, when fully implemented in the states, will go a long way toward preparing high school graduates for work and postsecondary education.

The most common objections to such policies are: (1) More students will drop out of high school if all are forced to take difficult courses or pass high-stakes, end-of-course tests. (2) Students who are interested in technical or vocational postsecondary education may not need the college-preparatory curriculum. (3) It is not possible to recruit enough qualified teachers for widespread enrollment in college-preparatory courses. (4) High-stakes exams are discriminatory and punitive, especially when many students have had inadequate opportunity to learn.

While these worries are discounted by many analysts, such concerns clearly must be addressed. The bottom line, however, is even more clear: stronger curriculum and assessment policies must be implemented – and implemented widely – to achieve necessary levels of educational opportunity and achievement.

High Quality Teaching

Widely accepted research now indicates that good teaching is perhaps the most important factor in increasing student learning. Most states are concerned with this issue, both because they want to increase the capacities of their teachers and because many face a serious shortage of teachers in the near future.

All of the usual reasons for being concerned about teaching capacity are compounded by the higher educational aspirations we have for the next generation. We have no reason to expect that the next generation of students will have greater academic aptitude than earlier generations – they will almost surely resemble their parents. But we want and need them to be better educated. This cannot happen without more effective, more engaging teaching.

Good teaching is a particularly salient P-20 issue because it is a joint product of the elementary-secondary and postsecondary systems. Postsecondary institutions are responsible for assuring that teachers: know the content they are responsible for teaching,

know the research on effective teaching, understand the connection between curriculum and assessment, can use assessment to improve learning, and have acquired the basic skills required for effective teaching. Postsecondary and K-12 systems should be jointly responsible for giving prospective teachers an extensive period of well-supervised practice to help them hone their skills in real classroom settings and for continuing the professional development of teachers.

No state has done all it needs to do in this area, but the most effective state policies and practices:

- Bring arts and sciences faculty, education faculty, and practicing teachers together to define curricular standards for student learning and teacher preparation;
- Prepare K-12 teachers in the subject matter they will teach as well as in basic principles of pedagogy and children's cognitive development;
- Give prospective K-12 teachers substantial apprenticeship teaching and mentoring opportunities to prepare them for challenges they will encounter in their own classrooms;
- Provide adequate funding to ensure that apprenticeship – like the clinical training of medical practitioners – is a core component of the training program rather than a weakly-funded afterthought;
- Use assessment data to gauge student learning, and use feedback to improve teaching, teacher education, and curriculum;
- Incorporate technology into curriculum and instructional practices on university campuses, helping ensure that future K-12 teachers experience directly the capacity of such tools to enhance teaching and learning;
- Often use "soft money" for start-up initiatives that lead to sustained progress in building a culture of quality teaching in a state; and
- Align key policies and practices with prevailing standards for students and teachers.

The success of early outreach, the definition and implementation of curricular standards, and the success of students in meeting those standards depend fundamentally on the quality, capacities, and practices of teachers in the classroom.

Student Financial Assistance

Unlike K-12 education in the United States, postsecondary education is not free, and the price has been rising. We will not be able to increase participation in postsecondary education successfully and substantially if low-income students cannot afford to attend. Nor will participation increase if students with limited financial resources do not believe, early in their school career, that college is affordable. Unless low-income students know well in advance that adequate aid is available, we cannot expect them to put forth the effort required to prepare for postsecondary education.

The federal government provides grants and loans for students, but without a state commitment, federal student aid does not assure affordability. Some states have attempted to assure affordability by keeping tuition and fees low, but this strategy is becoming less and less viable as enrollments and costs rise faster than state revenues.

Many states are experimenting with student assistance programs, often quite creatively. In addition to removing economic barriers facing poor students, they have used 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. All of these are legitimate goals, and targeted student assistance may help advance them. But given the many goals and the expense of student financial assistance programs, states need to be certain that they are effectively and efficiently advancing the goals of greater participation and success in higher education.

The best examples of student assistance programs:

- Motivate students in grades K-12 to set high achievement goals and choose challenging courses;
- Are well-funded and highly visible – particularly to low-income students and their parents, who are most likely to be discouraged by the perception that a college education is beyond their means;
- Are well integrated with and complement federal and private aid programs;
- Reliably receive additional appropriations to cover increases in student costs;
- Fit the financial circumstances and educational goals of a wide range of students, including the most needy;
- Describe clearly the kinds of support that they provide students as well as the information that students and their parents will need to supply during the application process;
- Allow students reasonable freedom of choice and enable them to transfer from one institution to another without major impediments; and
- Are accountable and appropriate to the goals they serve and can be evaluated by policy goals that are clearly defined and well understood among state policymakers.

Some states have approached student assistance by creating many small programs with complex rules. These usually fail to add up to the total need, and they also are expensive to administer and confusing to parents and students. Such approaches are likely to hinder rather than help states reach the goals of greater participation and success in postsecondary education.

Recently a number of states have created or expanded programs that consider high school academic achievement and taking a college preparatory curriculum as criteria for receiving financial aid. The federal government has reinforced these efforts by providing

additional aid to Pell Grant recipients who have taken a rigorous high school curriculum. Such efforts to stress the importance of academic effort and achievement can play a very useful role in building the foundation for a successful P-16 system. It is vitally important to recognize, however, that both affordability and adequate preparation for college must be widespread in order to meet the educational aspirations of the American people. States will need to strike a balance among their investments in different types of student assistance, their investments in the quality of educational programs, and their financial capacity.

Success in College

The surest pathway toward student success begins early and covers all the bases – early aspirations for college, familiarity with college "folkways," solid academic preparation, adequate financial support, and a single-minded focus on academic success. But many students who *can* succeed don't have all the bases covered. Many first generation students find college an unfamiliar world, where it is easy to lose one's way. Adult students encounter obstacles in the form of inflexible institutional policies and practices that make it difficult to get in and stay "engaged" as they struggle to balance work and family responsibilities with the demands of an academic program. Other students have to overcome inadequate academic preparation in order to do college level work.

Every year thousands of students withdraw from postsecondary education without completing a degree or certificate program. Many more of them would persist and succeed if colleges and universities deliberately and strategically re-designed themselves to promote greater student success. The key components of a campus geared for student success include:

- Making student success a prominent feature of the institutional mission;
- Setting performance standards at high but attainable levels, and helping students reach them;
- Teaching first-year students how to use college resources, without delay;
- Building "communities of learners" that are organized around the classroom;
- Developing networks and early warning systems to support students needing help;
- Connecting *every* student to meaningful activities and positive role models;
- Finding and removing obstacles to student success; and
- Making successful practices widely available, rather than "boutique" programs which help just a few students.

While each of these practices can help more students succeed, their potential will be unfulfilled unless they become integral parts of a campus culture focused on successful student learning. Campus reward systems and policies must value undergraduate education and support student achievement. Residual attitudes and beliefs that dampen

academic expectations and discount student potential must be replaced with high aspirations for all students and a commitment to experimenting with teaching approaches and policies that promise to yield better learning outcomes.

In the end, more student success depends both on a system that better prepares students for postsecondary education *and* a postsecondary system that serves more effectively those students who enroll.

Data and Accountability Systems

In many states, the data and accountability systems for both K-12 and postsecondary education are poorly designed for the challenges of the twenty-first century. For most of the twentieth century, student achievement was optional from the state perspective – those who achieved moved on to higher education, and those who did not found reasonably well-paying, lower-skilled jobs. Consequently, states rarely collected information about students and student achievement; that was left to the individual efforts of schools and colleges.

As educational aspirations grew late in the twentieth century, the K-12 standards movement and postsecondary education performance reporting substantially increased state-level data collection. Most states began by collecting aggregate information about students enrolled in particular schools. Aggregate information has been used to identify issues and problems, but it has not been very successful in improving performance. The strongest state systems for data and accountability (see the full article for details on Florida, Maryland, Texas, and California's Cal-PASS system) now give leaders better tools for monitoring student progress over time and improving system performance. With the help of various national initiatives, especially the Data Quality Campaign (DQC), more and more states are measuring their own capabilities against desirable benchmarks and improving their data systems.

Exemplary state data and accountability systems:

- Establish standards for K-12 achievement that lead naturally and seamlessly toward the standards required for admission and success in postsecondary education.
- Track the performance of individual students throughout their educational career (including into postsecondary education) in ways that:
  - Permit teachers to diagnose and address learning gaps;
  - Enable school leaders to assess the performance of a school in terms of the later success of its students;
  - Enable school leaders to identify especially successful teaching techniques that merit broader use;

  - Enable postsecondary leaders to assess their effectiveness in preparing teachers and school leaders; and
  - Enable policymakers to assess system-wide performance in order to find paths for improvement.
- Increase the commitment among stakeholders to collect, analyze, and use information on student performance.

The best accountability systems are much more than reporting mechanisms. Good systems assess and improve K-12 and postsecondary achievement and lead to more students meeting the standards of admission and success in postsecondary education. They can also help K-12 and postsecondary partners align learning goals and educational strategies at each stage of the educational system.

Conclusion

These essays articulate what state educational systems can do, and perhaps what they must do, to enable the next generation of American youth to reach their educational goals. Collectively, they argue what is perhaps obvious: success in postsecondary education can become widespread only if the entire educational system – from early childhood through elementary school, high school, and college – is geared toward preparing and enabling students to become successful learners and workers at a high level of achievement.

Although these essays encourage systemic thinking and integration, they do not suggest a single "model" for each state situation. Effective state systems exhibit enormous variation in structure and detail, and bureaucratic uniformity has rarely produced educational excellence. If P-16 educators and policymakers agree on fundamental, substantive issues, states will be able to make real progress within their own traditions and structures.

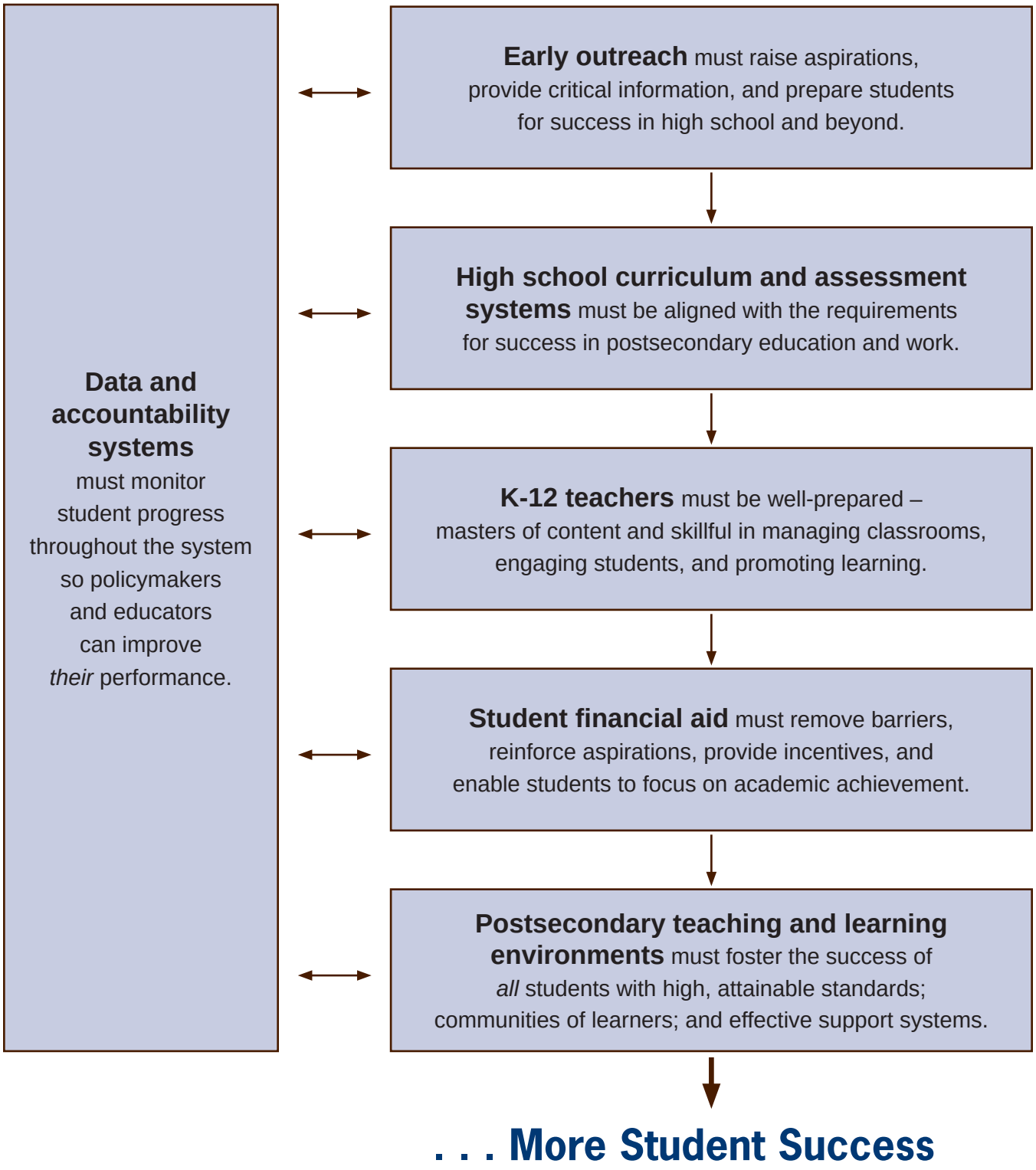
These essays do challenge states to make significant changes in policy and practice. But they do not suggest the impossible. Every state has the capacity to provide high quality educational opportunities to every child and young person. We owe them no less.

---

[1] In 1960 only 60 percent of 25-29 year olds had completed high school, 23 percent had completed some college, and only 11 percent had obtained a bachelor's degree or higher. By 2004 nearly 87 percent in the 25-29 age group had completed high school or obtained a GED credential (GEDs were not included in the 1960 data), 57 percent had some college, and 29 percent had obtained a bachelor's degree. If they meet their goals, current high school students will more than double previous rates of educational attainment.

[2] *Public Accountability for Student Learning: Issues and Options*, Business-Higher Education Forum, Washington, D.C. February, 2004; *Accountability for Better Results: A National Imperative for Higher Education*, National Commission on Accountability in Higher Education, SHEEO, Boulder, Colorado, March, 2005; *A Test of Leadership: Charting the Future of U.S. Higher Education*, Commission Appointed by Secretary of Education Margaret Spellings, U.S. Department of Education, Washington, DC, September, 2006; and *Transforming Higher Education: National Imperative – State Responsibility*, National Conference of State Legislatures, Blue Ribbon Commission on Higher Education, Denver, Colorado, October, 2006.

A Systemic Solution for . . .



Early Outreach

By Andrea Venezia and Terese Rainwater

Most Americans now understand that every person must be well educated in order to lead a productive, satisfying life in an ever-changing and increasingly demanding global economy (Immerwahr, 2004; Friedman, 2005; The Council on Competitiveness, 2006). And a recent ACT study shows that the knowledge and skills needed for postsecondary education and for work have merged (2006). Although there is some debate about whether colleges and the workforce demand the exact same level of rigor and knowledge in core subject areas, it is clear that, in order to enter into a career path that can support a family and offer professional advancement, students must graduate from high school with strong backgrounds in the core subjects. The implications are clear: *all students* must be prepared for some form of postsecondary success. While this does not mean that all students must earn a degree or even attend college, all should be provided with and engaged in a rigorous high school curriculum in order to be prepared for success in college or the workforce.

While *all students* is an ambitious target, the consequences for the nation and for individuals make any less-ambitious goal entirely unacceptable. Whose children should be selected for second-class citizenship? What fraction of our adult population can we afford not to educate for a productive adult life? While it is clear that, practically speaking, not every high school student will be prepared for postsecondary education, that must be the goal of the systems. If the systems fall short of that goal, appropriate supports must be provided. And if students decide that they do not want to pursue, for example, an "Advanced Placement" curricular path, the alternatives should be just as rigorous.

A major issue for debate is how best to provide the necessary knowledge and skills for all students. Existing early outreach programs that address the needs of a few are necessary given current inequalities, but the need dwarfs their capacity – and will continue to do so for the foreseeable future. Focusing on outreach programs will not solve the problem. States must change systems and the connections between systems if they wish to improve opportunities for all students.

Educators must keep all students engaged in their studies and demonstrate the connection between K-12 coursework and life after high school, and state policies must reinforce those efforts. We argue, therefore, that state policymakers, educators, and community leaders must build a systemic approach for pre-college outreach. Statewide P-16 systems should incorporate the best and most promising practices of pre-college outreach within both secondary and postsecondary structures, with

emphases on student achievement, supports, and relevancy. They should, for example, provide college admissions and course placement information for all students and ensure all students access to college-preparatory courses and tutoring.

Both economics and equity demand that all high school students participate in a rigorous course of study. States must determine what works, and then use that knowledge to scale up effective efforts. This is no simple matter; scaling up is quite possibly the most difficult part of moving from multiple programs to a coherent system – especially given different approaches and populations served and a lack of rigorous evaluations in the field. Good data must be collected and used to make programs more effective; to incorporate such programs into state P-16 structures; and to improve state capacity to evaluate, institutionalize, and sustain these efforts.

Good data must be collected and used
to make programs more effective;
to incorporate such programs into state P-16 structures; and
to improve state capacity to evaluate, institutionalize,
and sustain these efforts.

Why Early Outreach?

Pre-college outreach programs were developed essentially to ensure that students who are traditionally underrepresented in postsecondary education have the same opportunities to attend and succeed in college as the students who are traditionally considered "college-bound." Young people whose parents are more prosperous and better educated are far more likely to attend and succeed in college than students whose families are not advantaged in those ways (Mortenson, 2000; Gladieux and Swail, 1998; Horn and Chen, 1998; Berkner and Chavez, 1997). Pre-college outreach programs try to ensure that participants have the opportunities and support necessary to prepare for and succeed in college.

While almost all high school students plan to attend college, students with more financial resources and higher parental educational attainment levels tend to have more information about the range of opportunities, academic preparation requirements, and the availability of financial assistance. Students with these advantages are more likely to have:

- Parents who can help with studies or hire a private tutor if students have difficulty in school;
- Opportunities to visit a college campus;

- Teachers and counselors who view them as college bound;
- Schools with more resources; and
- The ability to pay for college in whole or in part, more information about financial aid, and more support in filling out financial aid paperwork.

Young people who are poor or those whose parents have not attended college must often overcome the absence of all of these supports. Pre-college outreach programs work to compensate for these inequalities by, for example, providing academic tutoring, college visitation opportunities, a cohort of peers, high expectations, financial aid advice, and counseling.

The United States has a history of providing high quality public education to a privileged elite. Early in the nation's history, African American slaves were excluded from schools. Although a broad system of public education emerged in the nineteenth century, in retrospect it is "clear that the system of public education that emerged in the United States was inherently unfair to Germans and the Irish, to Catholics and Jews, and, of course, to African Americans and Native Americans who were at first excluded from the common schools" (Hiner, 1998). In the 1950s and 1960s, pre-college outreach programs were formally established to address these issues. Such programs were first supported by religious entities and foundations, and then, through the authorization of the Higher Education Act in 1965, also by the federal government. Literally hundreds of pre-college outreach programs are now financed by federal, state, and local governments as well as by businesses, non-profit organizations, and individuals. A few of these programs are described briefly in this paper, and more comprehensive descriptions are available in other sources (The College Board, 2001; Cunningham et al, 2003).

A main theory behind P-16 reform is that aligned, coherent policies will allow all students to meet higher standards and move easily from one level to the next.

Since there are severe inequalities and capacity problems in our nation's schools, pre-college outreach programs will continue to play an important role for the foreseeable future. It is clear, however, that these programs in themselves are not enough. Ideally, all students would receive all the help they need to prepare well for college simply by working hard to complete their K-12 schooling. Because the nation has not yet attained this ideal, there is a continuing need to support programs that are providing high quality, essential services to students, while at the same time increasing the capacity of K-12 schools to prepare all students well for college.

Programmatic Efforts vs. Systemic Reform

Unfortunately, throughout the country, pre-college outreach programs have tended to be ancillary efforts that are not an integral part of either postsecondary education institutions or state education policy structures. These special programs exist because the underlying educational system does not meet the needs of all students. While these "add-on" efforts may help, the fundamental problem cannot ultimately be solved without systemic change. A main theory behind P-16 reform is that aligned, coherent policies – specifically, those that result in a more seamless education system – will allow all students to meet higher standards and move easily from one level to the next. A systemic approach to P-16 education offers the hope that all students will know what is expected of them as they move from grade to grade – and from secondary to postsecondary education.

This paper considers how the principles and practices of good early outreach programs might be embedded in state educational systems. It describes the components of typical outreach programs, examples of statewide efforts, and what we have learned from some exemplary programs. We conclude by proposing a means of working toward a more systemic approach to early college outreach.

Included among pre-college outreach program goals are that students should persist in high school, graduate from high school, improve high school grades, apply to college, attend community college, attend a 4-year institution of higher education, and graduate from college.

What Research Says About Pre-college Outreach Programs

Among the problems facing pre-college outreach programs are the number of programs that exist, the significant length of time programs have been in operation, and the relatively small amount of information researchers have about those programs. In fact, until The College Board released the results of The National Survey for Outreach Programs (NSOP) in 2001, researchers were not sure how many programs existed nationally. Approximately 1,110 programs participated in the study, 465 of which were federal programs, including Upward Bound, Talent Search, and GEAR-UP (Swail and Perna, 2001). On average, programs have been operating for 11 years, with a multitude of goals and objectives and numerous strategies to achieve them. Included among program goals are that students should persist in high school, graduate from high school, improve high school grades, apply to college, attend community college, attend a 4-year institution of higher education, and graduate from college.

Reaching those goals requires more than money. As Perna and Swail (2002) write:

> [A] review of relevant research – plus the fact that gaps in access and completion have not been closed despite the resources the federal government has dedicated to closing them – suggest[s] that merely making financial aid available for students to attend college is not enough to ensure that all students have equal access to the benefits associated with earning a college degree.

Perna and Swail also report that 90 percent of the programs that participated in NSOP listed encouraging college attendance, improving college awareness, and increasing college exposure as important program goals; 84 percent listed building students' self-esteem; 81 percent listed providing role models; and 73 percent listed college completion.

What else is needed for pre-college outreach success? Recent research by Patricia Gandara (2001) sheds light on the components shared by the best pre-college outreach programs. Successful pre-college outreach programs have:

- A primary person who monitors and guides the student over time. This could be a teacher, mentor, counselor, or program director;
- Good instruction coupled with a challenging curriculum that is carefully tailored to students' learning needs;
- Long-term interventions. The longer students participate in a program, the more benefits they report;
- Cultural awareness of students' backgrounds. Many programs find that they have more success with some groups of students than others. Establishing cultural connections with students may be due, in part, to staff background and experience;
- Positive peer support. Students are more likely to succeed when a peer group provides academic, social, and emotional support; and
- Financial assistance and incentives. For many low-income students who identify postsecondary education as a goal, scholarships and grants may be essential to realizing that goal (Gandara, 2001).

The components listed above provide policymakers and educators with an idea of the attributes shared by successful programs, but there are several gaps in the research. Gandara lists one: research is unclear whether one kind of professional – a teacher, guidance counselor, or mentor – has more success with students than another. Researchers also do not know empirically which components have the greatest effect on students, nor do they have data on the combined effects of multiple components (Swail and Perna, 2001). Is a long-term program the most effective component? Does having a mentor, financial aid, and a long-term program produce better results than having high quality instruction, challenging curriculum, and peer support? Researchers also seek to discover how many students qualify for outreach programs versus how many are able to participate. Perna and Swail (2002) report that "although 11 million Americans are eligible for services through TRIO programs, only five percent of those eligible are being served due

to limited federal funding for these programs." How many students qualify for but cannot participate in pre-college outreach programs? Finally, research is unclear about when students should begin participating in a program. Are students who begin pre-college outreach programs in seventh-grade more successful than students who begin in the ninth-grade?

From a research perspective, little has changed since 2003. We still do not know how many students are eligible for additional supports or need them, nor do we have an accurate picture of who is being served or where there are overlaps or gaps in services. We also need more rigorous evaluations of program effectiveness. Given the magnitude of needs that pre-college outreach seeks to address, we believe that more research needs to be done so that K-12 education systems can learn from successful outreach programs and embed effective practices into schools systemically. The next section outlines attributes of some major programs.

Components of Existing Outreach Programs

To get a sense of different aspects of pre-college outreach programs, we surveyed data from case studies conducted by the Pathways to College Network in 2003. The Network includes a broad range of programs, including GEAR-UP, I Have a Dream, the Oklahoma Higher Learning Access Program (OHLAP), and the Children's Crusade of Rhode Island. The students served in every case are educationally and economically disadvantaged (Communication Works, 2002). Some programs target students as early as third-grade, though most serve students in middle school and high school. In some cases the lead agency is federal. In other instances a state or regional government provides funding and oversight, and some programs are operated and supported by non-profit organizations.

The components of the programs are as varied as their goals. These goals include tutoring, mentoring, counseling, parental involvement activities, curriculum and staff development, and financial aid. Some of the most comprehensive programs, such as the El Paso Collaborative for Academic Excellence, incorporate many attributes of systemic perspective, including whole-school reform, teacher professional development, accountability, technical assistance, and parent support.

Services also vary considerably, in terms of content and duration. Most programs identify a cohort of students and provide supplemental tutoring and activities geared toward college preparation. Some, such as TRIO, offer relatively intensive opportunities, start later in a student's life, and do not connect to schools as much as the Children's Crusade or the El Paso Collaborative. Others, such as GEAR-UP, are not as intensive, but can start earlier in a child's life.

One key element is evaluation. Of the programs surveyed, two had enlisted the help of an external evaluator, and three others had been evaluated by an external group. While external evaluations might not always lead to program improvement, they are a good indicator of whether programs are getting the information they need to understand how

well they are serving students' needs. One example of an external evaluation is that conducted for Rhode Island's Children's Crusade for Higher Education.

Very few of these programs can be called systemic in the sense of being fully embedded in schools or colleges. Only one could be classified as truly systemic in nature – the El Paso Collaborative. Three showed evidence of combining programmatic and systemic approaches – GEAR-UP, MESA (Math, Engineering, and Science Achievement) programs, and the Children's Crusade. The others offer more programmatic services to students.

Some of the state-level efforts are described in more detail in the next section.

> While external evaluations might not always lead to program improvement, they are a good indicator of whether programs are getting the information they need to understand how well they are serving students' needs.

State-Level Pre-College Outreach Efforts

State programs in Florida, Oklahoma, and Rhode Island provide different models for pre-college outreach that can be helpful in considering the components of a more systemic approach, while Oregon's efforts demonstrate one approach to systemic reform. For each state program identified below, we discuss the program goals, target populations, means of funding, eligibility criteria, and other factors that warrant consideration.

Florida

In 1983, the Florida Legislature established the College Reach Out Program (CROP). The program's purpose is to motivate and prepare educationally and economically disadvantaged students in grades six through twelve to pursue and successfully complete postsecondary education.

CROP serves approximately 9,300 students through ten state universities, twenty-six community colleges, and seven independent postsecondary institutions. Factors used to determine student eligibility include both the economic and academic status of the student and his or her family.

Funds are appropriated by the Legislature to the Department of Education and allocated competitively to postsecondary institutions around the state.

Community colleges, universities, and independent postsecondary institutions that participate in the program must provide procedures for continuous contact with students from

the point at which they are selected for participation until they enroll in a postsecondary education institution. Program activities must support the following goals: (1) motivate students to pursue a postsecondary education; (2) develop students' basic learning skills; (3) strengthen students' and parents' understanding of the benefits of postsecondary education; and (4) foster academic, personal, and career development through supplemental instruction. In addition, each program must have an evaluation component that provides for the collection, maintenance, retrieval, and analysis of data required by the state.

While Florida's College Reach Out Program is of limited size, it appears to embody the critical components of effective pre-college outreach programs and policies: well-defined goals and objectives for statewide pre-college outreach combined with systematic ways to identify and target students, collect student data across segments, allocate funds, evaluate programs, and report data.[1]

Oklahoma

In 1992 Oklahoma established the Oklahoma Higher Learning Access Program (OHLAP), a systemic program that seeks to increase student preparation for and participation in postsecondary education through a college scholarship incentive (Oklahoma Higher Learning Access Program, 2001). Supported largely by state funds but partially by federal GEAR-UP dollars, the program offers full tuition at a public 2- or 4-year institution or a partial scholarship at an accredited private college or university. The program pays only for the hours in which students are actually enrolled and is available to students for a maximum of five years.

To ensure that OHLAP students are prepared for college-level work, participants must complete a 17-unit core curriculum which includes the following classes: four years of English, two years of laboratory sciences, three years of mathematics, two years of history, one year of citizenship skills, two years of foreign language or computer technology, two additional units from any of the subjects previously mentioned, and one year of fine arts or speech. To qualify for the scholarship students must enroll in the eighth, ninth, or tenth-grade and meet several program requirements, including:

- Completing the 17-unit core curriculum based on college admissions requirements;
- Graduating from high school;
- Maintaining 2.5 GPA or better in the required core courses in high school;
- Maintaining 2.5 GPA or better overall in high school;
- Completing required homework;
- Attending school regularly;
- No drug or alcohol use;
- No criminal acts; and

- Family income when initial eligibility is determined must not exceed $50,000 (Mize and Fair, 2002).

OHLAP's original design was to primarily reach economically disadvantaged students in urban centers. As the program came to enjoy broader state commitment, its target expanded to include students whose family income is $50,000 or less. Recent changes to OHLAP eligibility have produced large gains in student participation. In the 2000-01 school year – the first year available to students whose family incomes are $50,000 or less – almost 9,500 students enrolled. The OHLAP Year-End 2000-01 report noted, "nearly as many students enrolled in OHLAP in one year as the first eight years of the program combined (9,500 for 2000-01 compared to 10,800 total for 1992-93 through 1999-00)." This report also noted that nearly 50 percent of the first cohort of OHLAP students (1996 high school graduates) completed college in comparison with 33 percent of all first-time, full-time, first-year college students (Mize and Fair, 2002).

In 1993, Oklahoma also began implementing a systematic effort to use the Educational Planning and Assessment System (EPAS) series developed by ACT to provide widespread, voluntary, diagnostic testing in English, mathematics, reading, and science reasoning to students in grades eight and ten. EPAS is designed to help schools align curriculum, evaluate instructional programs, use student achievement data to improve college success, and prepare all students for postsecondary opportunity. In 1993, four school districts participated in the EPAS program. In 2001, 244 school districts and 37 private schools participated in the program. The use of EPAS has helped students improve their preparation for college, increased their enrollment in college-preparation courses, and improved their performance on college admissions exams. In addition, more students of color who participate in the EPAS program are planning to go to college. EPAS and the public outreach programs benefit all students in the state and are especially helpful in reaching students with limited access to information and help in preparing for college.

In addition to OHLAP and EPAS, Oklahoma, with GEAR-UP support, recently launched a broad program of public outreach, using mass marketing techniques to increase awareness of college. The Oklahoma early outreach program does not provide intensive services to substantial groups of students, but more than many other state efforts it has a "systemic" feel. Its EPAS and public outreach efforts reach virtually all students, and OHLAP is available to all students with financial need who meet the program requirements. These statewide initiatives are supplemented by local programs, which provide more direct services to individual students.

Rhode Island

In 1990 the Rhode Island Commission for Higher Education promoted the creation of the Children's Crusade for Higher Education, arguing that a substantial public commitment is necessary to increase access to higher education for disadvantaged children (Brandeis University, 2002).[2] The goal of the Crusade is to increase the number of disadvantaged and minority students successfully enrolling in and completing a postsec-

ondary program by providing a long-term intervention, beginning in the third-grade with programmatic supports (mentoring, tutoring, etc.) coupled with a strong state commitment in the form of tuition incentives. The Crusade is a nonprofit organization supported by multiple funding sources, including state and federal dollars.

From the first year of the program until the 1995-96 school year (when all qualifying third-graders could participate), enrollment grew from 2,800 students annually to over 3,300. In response to an audit that stated the Crusade was "impossibly large" and would not be able to meet its scholarship commitments, the Children's Crusade was redesigned to meet the needs of 500 students annually in the most economically distressed school districts. In addition, the Crusade moved from a "mentoring" model with a few other support services, to an "intervention" model based on developmentally oriented, highly individualized student programs supported by a wide array of options, including summer enrichment camps, scholarship counseling, and tutoring (Brandeis University, 2002).

The Children's Crusade is unique among pre-college outreach programs for several reasons. First, since its inception, the program has had a strong postsecondary education component. In addition, the Crusade has emphasized the importance of starting college preparation in the third-grade. The Crusade has also undertaken an independent external evaluation, made the findings public, and responded to the evaluation by creating a publicly available strategic plan. Finally, the Crusade is responsible for creating the College Access Alliance of Rhode Island (CAARI), a network of Rhode Island programs that seeks to increase postsecondary opportunity and access for all of the state's students.

The Crusade is an interesting model because it evolved from an initial broad statewide commitment to young students to a more intense but less systemic commitment to 500 students. Since the Crusade was downsized over time, its evolution suggests an important question: Can we discover ways to incorporate the techniques developed in the Crusade in all schools so that the education system is more successful for all third-grade students in Rhode Island?

Oregon

In 1983, *A Nation at Risk* raised concern about student performance nationally and called for higher standards and greater accountability (The National Commission on Excellence in Education, 1983). Oregon responded by rethinking its educational system and developing, in 1984, the "Oregon Plan for Excellence." This plan contained the seeds of the 1991 Oregon Educational Act for the 21st Century, legislation that mandated the development of the current standards, assessments, and certificates. Important legislation from that act includes the authorization of benchmarks for all students, assessed in third-, fifth-, eighth-, tenth-, and twelfth-grades; the Certificate of Initial Mastery (CIM), issued after grade ten; and the Certificate of Advanced Mastery (CAM), issued after grade twelve.[3]

In reaction to the 1991 legislation, the Oregon University System (OUS) developed the Proficiency-based Admission Standards System (PASS) to reform the admission process for Oregon's public universities. The goals were to ensure that students meet a high

standard of academic preparation before they matriculate at an OUS institution and to develop an admission system that focuses on proficiencies rather than time spent in a classroom.

Although Oregon's CIM, CAM, and PASS have different histories, philosophies, and overall goals, they are often viewed as part of the same education reform package. Though they are interrelated, they are two distinct sets of reforms. Philosophically, these reforms could create a system in which all students are prepared for college or the workforce (through the completion of a CAM), and most if not all are prepared for college (by meeting PASS proficiencies). The reality, however, is different, because development of the Certificate of Advanced Mastery (CAM) has stalled multiple times and PASS has been implemented in approximately 60 schools with two to four teachers being trained per school (Bueschel and Venezia, 2001).

Oregon's experience illustrates the challenges of systemic reform. While a detailed analysis of the Oregon experience is beyond the scope of this paper, one clear lesson is that systemic reform will take persistence and time.

Progress in State Programs

Some of the states we examined have a number of pre-college outreach programs, or widespread education reforms that attempt to link K-12 and postsecondary education. Several states are considering implementing default curricula that align high school course-taking requirements with postsecondary expectations.[4] California and Indiana are among the states that have continued working to improve opportunities for larger percentages of students to be college-ready. The California State University System (CSU) developed an Early Assessment Program (EAP) to help high school juniors learn about their level of preparation for the CSU System and take rigorous courses their senior year to remedy any academic gaps. EAP also helps teachers align their coursework with CSU's standards. Indiana's Twenty-First Century Scholars Program offers both need- and merit-based incentives for students to prepare for college. Below, we describe these two programs as examples of approaches that states take to provide greater opportunities for students' postsecondary success. This information may be useful for states embarking on wide-scale reform.

California

The CSU worked extensively with California's K-12 school system to overcome bureaucratic, procedural, and political problems in order to develop test items for the state's eleventh-grade assessment that indicate whether students are ready for college-level work. EAP is a collaborative effort between the CSU, the California State Board of Education (CSBE), and the California Department of Education (CDE). It was established to provide high school students with information to measure their readiness for college-level mathematics and English in their junior year and to help them improve their skills during their senior year. EAP's broader goal is to ensure that California high school graduates who enter the CSU are prepared to enroll and succeed in college-level

courses. The impetus for the program was the high remediation rate within the CSU system: approximately 50 percent of first-time freshmen admitted to the CSU require remedial education in English, mathematics, or both (Spence, 2005).

Representatives from the K-12 and CSU sectors worked together to augment the K-12 California Standards Tests (CSTs) with mathematics and English items that measure college-ready knowledge and skills. In mathematics, the items assess whether students have a deep enough knowledge of algebra and geometry. The English proficiency standards are aligned with the CST standards in English-language arts but focus more attention on requiring students to demonstrate their reading and writing skills. The exam includes a 45-minute essay requirement. To help students prepare better in English, K-12 and postsecondary educators developed a 12th-Grade Expository Reading and Writing Course, which high schools may pilot and adopt. It is aligned with California's content standards, geared toward preparing students for college-level English, and focuses on analytical, expository, and argumentative reading and writing (Spence, 2005).

Indiana

Indiana's 21st Century Scholars Program[5] is viewed as a national model for combining financial aid with pre-college access intervention. Initiated in 1990, it was the first state program to offer to pay college tuition costs for middle school students who qualified for the federal free and reduced lunch program. The Scholars Program targets students in the eighth-grade, and provides support services and a guarantee of grant aid to students who fulfill a pledge. The pledge requires that students finish high school, maintain at least a C grade point average, remain drug- and alcohol-free, apply for college and financial aid, and enroll in an Indiana postsecondary institution within two years of high school.

For students meeting the requirements, the 21st Century Scholars Program pays for 80 percent of the approved tuition and fees at a public institution in Indiana, or contributes a similar portion for tuition at an independent college. If a student has completed a more rigorous diploma – for example, the Core 40 diploma, which will be required of all students beginning with the class of 2012 – that student receives 90 percent of the tuition and fees. All of the tuition and fees are covered if a student receives the most rigorous diploma – the Academic Honors diploma. The state also provides support services for the Scholars, disseminates additional information about postsecondary education to the Scholars, and encourages them to pursue a college-preparatory curriculum.[6]

The 21st Century Scholars Program supplements the state grants that Scholars receive as a consequence of their aid eligibility, providing a small additional grant for full-need students and larger supplemental awards for students with less need. Most students who receive 21st Century Scholars awards also have full need, so their normal state grants are high and the additional award amounts are relatively modest. This pattern constrains the cost of the program for the state and provides an added incentive to fund other state grant programs. The report concludes that "state policy can affect the curricula that students actually complete, which, in turn, can influence their college success." Both the Academic Honors Diploma and Core 40 are positively related to

persistence in the first year of college, persistence from the first to the second year of college, and continuous enrollment. The Scholars Program has succeeded in achieving its primary goal – to encourage low-income students to enroll in postsecondary education. It has also had a positive impact on persistence and completion for students who earned 2-year degrees (St. John et al., 2004).

The Problem with the Status Quo: Areas of Concern and Obstacles to Change

As mentioned earlier, a major problem with pre-college outreach efforts is the current focus on programs instead of on systemic reform. Another central issue facing pre-college outreach programs is determining whether or not they work. Who is served? How well are they served? Are more students college-ready? Are more students enrolling in and completing postsecondary education? Unfortunately, there are few rigorous, independent, program evaluations that could provide this type of information. One external evaluation, by Brandeis University for Rhode Island's Children's Crusade (2002) summarized challenges many evaluators face.

> Pre-college outreach programs must hold themselves accountable for results with a rigorous, visible system for measuring outcomes.

Defining a "Crusader experience" presented a stubborn problem for this evaluation. No Crusade cohort has received consistent treatment every year, and even within cohorts there are significant differences in Crusaders' experiences. Programs offered one year by community service providers might or might not have been repeated the next year. Sites have changed. Some Crusader programs report difficulty meeting their recruitment goals and acknowledge that Crusaders may participate in other, non-targeted programs.

Program variability is not necessarily an inherent weakness, and it might not be possible to have a model of best practices. But pre-college outreach programs must hold themselves accountable for results with a rigorous, visible system for measuring outcomes. They must improve over time, and it is reasonable to compare similar programs with each other.[7]

Many programs share similar obstacles and problems related to evaluation (Gandara, 2001; Tierney and Hagedorn, 2002). These shortcomings are often due to a lack of resources, and many of them have been well documented. They include:

- The fact that students who need services may not be reached;

- A programmatic structure that cannot change whole school, system/district, or state cultures because of its limited focus;
- Programs selecting students who show "promise" instead of working with all students or focusing on students who have the greatest need;
- The failure of programs to articulate their goals and objectives in measurable ways;
- Lack of rigorous evaluations;
- Difficulty comparing sites within one program because goals, objectives, and other characteristics differ; and
- Lack of good data-collection procedures and methods of tracking students after they leave the program.

With the competitiveness grants, students who complete a course of study like State Scholars increase not only their ability to pay for postsecondary education, but also their likelihood of academic success.

Data collection is particularly problematic for programs that focus on getting students to college, but often do not know if their students were academically or psychologically prepared for college.

Another major issue before policymakers and educators is to examine data from key student transition points. A first step in this direction is to examine such transition points from pre-school through postsecondary education and calculate real and unmet need. Depending on the state, the data reveal different policy issues. For example, in Georgia and Oklahoma, for every 100 students who begin the ninth-grade, only 11 will complete a postsecondary degree. On the surface, it appears that these two states have the same problem, and indeed both states may seek to address the number of students who successfully complete degrees. A more in-depth look at the data suggests that the end of the student pipeline is not where these states should concentrate their policy efforts. In Georgia, for every 100 students who begin the ninth-grade, 50 drop out before high school graduation (Ewell et al., 2003). The problem in Oklahoma is different and manifests itself in the number of high school graduates enrolling in postsecondary education. For every 100 Oklahoma students who begin the ninth-grade, thirty-six will not go to college even though they have graduated from high school (Ewell et al., 2003). The message here is that one solution does not fit every state. States need to examine their data to find areas of success, existing gaps, and unmet needs.

Changes in State and Federal Policy

In addition to significant innovations in pre-college outreach programs, there have been profound changes at the state policy level as states have begun to address the academic rigor necessary for postsecondary success. Several states have significantly increased their high school graduation requirements, have made a rigorous curriculum the default curriculum for all students, or both (Education Commission of the States, 2006a and 2006b). For example, 26 states have increased the graduation requirements for their standard diploma, effective for graduating classes between 2006-2011.[8] In addition, eight states have passed a default college-ready/work-ready curriculum (as defined by the Education Commission of the States) in which students must participate unless they and their parents "opt out."[9] In these states, the college-ready/work-ready curriculum includes: four years of English, three years of mathematics (Algebra I, Algebra II and Geometry), three years of lab science and three years of social science. Given that data collection and evaluation are essential for determining whether state policy changes are producing the desired results, they will be needed in the case of default curricula reforms, as well as in the areas we addressed in 2003.

Finally, there has also been significant federal contribution to college and work readiness and success in the form of the State Scholars and the Academic Competitiveness Grants initiatives. State Scholars is a multi-state effort designed to increase the number of high school students taking a rigorous high school curriculum so they will be better prepared for college and work. A special feature of this initiative is its focus on involving the business community to deliver the message of high school rigor to students. Twenty-four states have received federal funds to launch State Scholars programs. Students are encouraged to take the State Scholars Core Course of Study: four years of English, three and a half years of Social Science, three years of mathematics (including Algebra I, Geometry, Algebra II), three years of lab science (physics, chemistry, biology), and two years of the same foreign language other than English.[10]

In conjunction with State Scholars, the U.S. Department of Education has launched the Academic Competitiveness Grants initiative. These grants provide additional funds to students who have taken a rigorous course of study in high school and who are eligible for Pell grants. With the competitiveness grants, students who complete a course of study like State Scholars increase not only their ability to pay for postsecondary education but also their likelihood of academic success. The emphasis on a rigorous high school curriculum ensures that students are college-ready, and the additional grants to Pell-eligible students ensure affordability for those who need it most.[11]

A New Way of Thinking about Pre-College Outreach

Conceptualizing, developing, implementing, and evaluating pre-college outreach programs that are part of a broader P-16 system is important because the approach to student learning becomes one of student success over time, as opposed to piecemeal programs in which students are treated for impending "failure." It is the difference

between prevention and stopgap, after-the-fact efforts. In a true P-16 system, public education is constructed from the point of view of the student – not the practitioner or administrator. How would a system seen from the student's perspective look different? It would have the following characteristics:

- The gaps in knowledge, skill, and ability levels from one grade to the next are reduced.
- The need for college-level developmental, or remedial, education is diminished.
- Students can trust that they will be prepared to enter the next grade ready to succeed.
- Students do not need to guess how to get into college, how much college costs, or how to meet these costs. They learn about those issues throughout the K-12 years and are thus able to make educated choices about their futures.
- Students do not need to guess what courses they need to take to prepare well for college.
- Students have college mentors and advisors at each level of education; every teacher is a college advisor; every school counselor is an advocate for equitable K-12 opportunities and for student success after high school.
- Student achievement is addressed throughout K-12 and also in the critical early years – pre-K-3. In these years, students learn the basic skills that they will apply in later grades. In short, these fundamental skills are literacy-based. Between kindergarten and third-grade, students learn how to read; after third-grade students read to learn (Juel, 1988; Slavin et al., 1993).[12]

It is important to support pre-college outreach programs that provide high quality essential services to students, while at the same time working to ensure that all students have the opportunity to prepare well for college.

In short, an ideal pre-college program would not be a program at all. Rather, it would be a coordinated, cohesive, seamless system of education in which all students are prepared for postsecondary opportunities. This does not mean that 100 percent of high school graduates will or should go to college. It does, however, mean that 100 percent of them will be prepared to go to college if they so choose and will be able to make informed decisions about their futures. In many ways, pre-college programs are a response to a system that is not working. While we struggle with these issues in the real world, it is important to support pre-college outreach programs that provide high quality essential services to students, while at the same time working to ensure that all students have the opportunity to prepare well for college.

Ideally, such programs will involve every sector of education. While many pre-college outreach programs are sponsored by postsecondary institutions, the institutions and systems of postsecondary education that continue to behave as though they are completely separate from the public school system must change. Teachers must seek not only to help students learn the subject material at hand but also to prepare them for postsecondary success; pre-college outreach must be based in rigorous curriculum; state structures must support quality teaching; financial aid must be available for students to take advantage of postsecondary education; and educators must be held accountable for student results with data-driven diagnostic and accountability systems. The sectors are all connected.

Policy Recommendations

Below are two sets of policy recommendations – one for the short term and the other for the long term. This paper proposes that states move away from programmatic outreach programs and toward systemic state work; it does not, however, propose eliminating programs until all students are served well. Since that day may be long in coming, pre-college outreach programs remain necessary. The recommendations listed below account for these issues.

Short-term recommendations:

- Engage K-12 and postsecondary education in a discussion regarding P-16 reform; develop goals and desired outcomes. Plan a strategy to meet those goals.
- Develop a clear message and stick to it.
- Develop a public engagement strategy regarding P-16 reform and outreach.
- Establish recognizable, transparent, and predictable policies between education sectors. Achieving this goal will require working with postsecondary education to ensure, for example, that entrance standards are clearly articulated.
- Develop, or continue to support, pre-college outreach programs as state P-16 work continues.
- Develop and implement diagnostic testing programs based on high standards for all students.
- Have measurable, articulated goals and objectives.
- Mandate that state-funded programs collect relevant data and conduct external, rigorous evaluations.
- Use evaluations as diagnostic tools that improve services to students and increase student success.
- Fund evaluations and provide technical assistance to programs.
- Involve the business community early.

Long-term recommendations:

Watson Scott Swail and Laura Perna, in The College Board's *2001 Outreach Program Handbook*, proposed four long-term policy recommendations that are consistent with this paper's perspective. They are:

- Ramp-up current outreach activities to reach more of our youth.
- Improve the instructional quality and delivery of outreach programs.
- Expand opportunities for networking among programs.
- Link outreach programs directly to our schools and long-term systemic plans.

We also add the following:

- Address course-taking patterns; make sure all students have access to classes that prepare them for the next stage of schooling. For example, students must participate in algebra by the end of eighth-grade in order to be on-target for completing a college preparatory math sequence by the twelfth grade.
- Improve data systems at the state level. States need to connect their K-12 and postsecondary data systems, and connect those systems with data from large-scale pre-college outreach programs. Evaluations must be conducted in both the short term and the long term so states can answer questions about how the pre-college outreach programs help students today and 15 years from now.
- Improve data systems at the program level. Pre-college outreach programs must collect data on their students and analyze the data to understand if they are achieving their goals and serving students well, using both short-term and long-term evaluations to improve their effectiveness.
- Work with education programs, unions, and associations to train teachers and counselors to include effective college preparation and advising in every high school classroom.
- Once good evaluations are completed, use that information to change state policy by eliminating what does not work and incorporating what does into the education system as a whole.

Summary

Preparation for, and participation in, postsecondary education for all students is a difficult proposition to fulfill. Educational inequities result from different perceptions about who should go to college, who is prepared for college, what it means to be college-ready, and whether college is affordable. In addition, the current early childhood, K-12, and postsecondary systems are disjointed and often connected only by policies and programs that are confusing for students and their parents. Currently, students' opportunities to learn and prepare for college are inequitable. Since almost all students attend college after high school, it makes no sense to continue to prepare only an elite group of students for the demands of postsecondary education (Venezia et al., 2003).

There are hundreds of outreach programs, but no system, or center; thus, the programs place the burden of improvement on the student with comparatively little concern for how the system itself might change to meet students' needs. The lack of sound evaluation compounds these problems by making it difficult to assess whether the programs are truly meeting students' needs.

To achieve this success, states will need to move beyond a programmatic approach to a more systemic approach encompassing every student in every school.

A P-16 system offering pre-college outreach for all students would be more focused on prevention and success than the current system. Success in this context means ensuring that all students who graduate from high school have the information and preparation they need to succeed in some form of postsecondary education. To achieve this success, states will need to move beyond a programmatic approach to a more systemic approach encompassing every student in every school. A cautionary note is essential, however: a worst-case scenario would be for states to reduce their support for pre-college outreach programs while not improving and coordinating their current educational systems.

While the need for pre-college outreach programs will probably never be eliminated, this paper urges states and regions to include components from successful pre-college outreach programs (e.g., providing college admissions and course placement information to all students, and ensuring that all students have access to college-preparatory courses and tutoring) in every student's day-to-day schooling. Addressing pre-college outreach systemically may be more difficult in the short run, but it is the only way to serve all students equitably. In spite of, or precisely because of, the fact that states face shrinking budgets, this is an era that requires us to rethink our current approach to pre-college outreach and develop new ways of providing postsecondary information and opportunities for all students. In this time of economic scarcity, it is crucial that states view college preparation and P-16 reform as investments – investments that can help drive state economies and improve the quality of people's lives.

Endnotes

[1] http://studentservices.fgcu.edu/CROP

[2] http://thecollegecrusade.org/main

[3] Recent policy changes have shifted the focus from grade-level performance to overall benchmarks. Rather than grades three, five, and eight, the assessments refer to benchmarks one, two, and three.

[4] While a default curriculum is not a perfect proxy for ensuring that all students have access to high-level coursework, it is a first step. In addition, it is important to ensure that a cookie-cutter, one-size-fits-all approach is not taken, since that could exacerbate the nation's high school drop-out problem. Finally, states need to focus on not only the number and names of courses, but on course content and the competencies students are expected to master.

[5] This is different from the federally-funded State Scholars Initiative program: Indiana Core 40 Scholars.

[6] www.in.gov/ssaci/programs/21st/index.html

[7] An exception is Mathematica's longitudinal study of Upward Bound. Although this study showed that participants generally have higher expectations, "Upward Bound appeared to have no impact on high school graduation or college enrollment." (Myers and Schrim, 2000)

[8] The 26 states that have increased the standard diploma requirements for high school graduation and the effective dates are: Arkansas –2010; Delaware – 2011; District of Columbia – 2008; Florida – 2011; Illinois – 2010; Indiana – 2011; Iowa – 2011; Kansas – 2009; Kentucky – 2012; Louisiana – 2008; Maine – 2010; Michigan – 2011; Minnesota – 2008; Mississippi – 2009; Missouri – 2010; New Jersey – 2008; New Mexico – 2009; Oklahoma – 2010; Oregon – 2010; Rhode Island – 2008; South Dakota – 2010; Texas – 2008, with new additional requirements passed in December 2006 for the class of 2011; Utah – 2011; Washington – 2008; West Virginia – 2009; and Wyoming 2006.

[9] The eight states that have met the college-ready/work-ready high school curriculum as defined by the Education Commission of the States are: Arkansas – 2010; Delaware – 2011; Indiana – 2011; Kentucky – 2012; Michigan – 2011; Oklahoma – 2010; South Dakota – 2010; and Texas – 2008. In these eight states, this curriculum is required as a "default" and students who "opt out" participate in the lesser requirements prior to the effective date listed above.

[10] www.wiche.edu/statescholars

[11] www.ed.gov/admins/finaid/about/ac-smart

[12] Pre-college outreach programs that start as late as the third-grade have started too late. Students who are not on grade-level reading by the end of the first-grade are unlikely to be on grade-level reading by the end of third-grade, and if they are not on grade-level reading by the end of third-grade their chances of graduating from high school are slim.

[13] An example is the Education Trust's College Begins in Kindergarten (Education Trust, 2000).

References

ACT. 2006. *Ready for College, Ready for Work*. Iowa City, IA: ACT.

Berkner, L., and L. Chavez. 1997. *Access to Postsecondary Education for the 1992 High School Graduates*. PEDAR Report, NCES 98-105. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Brandeis University. 2002. *Every Child Holds the Answer: Rhode Island Children's Crusade*. Brandeis University Evaluation, January 2002.

Bueschel, A. and A. Venezia. 2001. *Oregon Technical Report for Stanford University's Bridge Project*. Stanford, CA: Stanford Institute for Higher Education Research.

College Board. 2001. *2001 Outreach Program Handbook*. New York, NY: The College Board.

Communication Works, LLC. 2002. *Capturing the College Potential of Students from Under-served Populations: An Analysis of Efforts to Overcome Social and Financial Barriers to College*. Prepared for the Pathways to College Network and the College Board.

The Council on Competitiveness. 2006. *Competitiveness Index: Where America Stands*. Washington, DC: The Council on Competitiveness.

Cunningham, A., Redmond, C., and J. Merisotis. 2003. *Investing Early: Intervention Programs in Selected U.S. States*. Montreal, Canada: The Canadian Millennium Scholarship Foundation.

Education Commission of the States. 2006a. *College Ready Standards*. Available at http://mb2.ecs.org/reports/Report.aspx?id=743.

Education Commission of the States. 2006b. *50-State High School Graduation Requirements*. Available at: http://mb2.ecs.org/reports/Report.aspx?id=735.

The Education Trust. 2000. *College Begins in Kindergarten*. Washington, DC: The Education Trust.

Ewell, P.T., Jones, D.P., and P. Kelly. 2003. *Conceptualizing and Researching the Educational Pipeline*. Boulder, CO: National Center for Higher Education Management Systems.

Friedman, T.L. 2005. *The World is Flat: A Brief History of the Twenty-First Century*. New York, NY: Farrar, Straus, and Giroux.

Gandara, P. 2001. *Paving the Way to Postsecondary Education: K-12 Intervention Programs for Underrepresented Youth*. Washington, DC: National Postsecondary Education Cooperative, Working Group on Access to Postsecondary Education.

Gladieux, L.E. and W.S. Swail. 1998. *Financial Aid is Not Enough: Improving the Odds of College Success*. The College Board Review, 185: 16-21, 30-31.

Hiner, N.R. 1998. *The Past and Future of American Public Education*. 1998-99 Budig Teaching Professor Address, The University of Kansas.

Horn, L., and X. Chen. 1998. *Toward Resiliency: "At-Risk" Students Who Make it to College*. PEDAR Report, Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

Immerwahr, J. 2004. *Public Attitudes on Higher Education: A Trend Analysis, 1993 to 2003*. San Jose, CA: The National Center for Public Policy and Higher Education.

Juel, C. 1988. "Learning to Read and Write: A Longitudinal Study of 54 Children from First through Fourth Grades." *Journal of Educational Psychology*, 22: 437-47.

Mize, D.A. and B. Fair. 2002. *Oklahoma Educational Planning and Assessment Systems (EPAS) and the Oklahoma Higher Learning Access Program (OHLAP): Systemic Approaches to Student Success*. NGA Center for Best Practices, Learning Lab 2002.

Mortenson, T. 2000. "College Participation for Students from Low Income Families by State, 1992 to 1998." *Postsecondary Education OPPORTUNITY*. Oskaloosa, IA: Postsecondary Education OPPORTUNITY.

Myers, D. and A. Schrim. 2000. *The Impacts of Upward Bound: Final Report for Phase I of the National Evaluation*. Washington, DC: U.S. Department of Education, Planning and Evaluation Services.

The National Commission on Excellence in Education. 1983. *A Nation at Risk: The Imperative for Educational Reform*. Washington, DC: U.S. Department of Education.

Oklahoma Higher Learning Access Program. 2001. *Year-End 2000-02 Report*. Oklahoma City, OK: Oklahoma Higher Learning Access Program.

Perna, L.W. and W.S. Swail. 2001. "Pre-College Outreach and Early Intervention." Thought and Action: *The NEA Higher Education Journal*, Summer 2001, pp. 99-109.

Rainwater, T. and S. Van de Water. 2001. *What is P-16 Education: A Primer for Legislators*. Denver, CO: Education Commission of the States.

Slavin, R.E., Karweit, N.L., and B. Wasik. 1993. *Preventing Early School Failure: Research on Effective Strategies*. Boston, MA: Allyn & Bacon.

Spence, D. 2005. *Status Report on EAP*. Wingspread conference presentation.

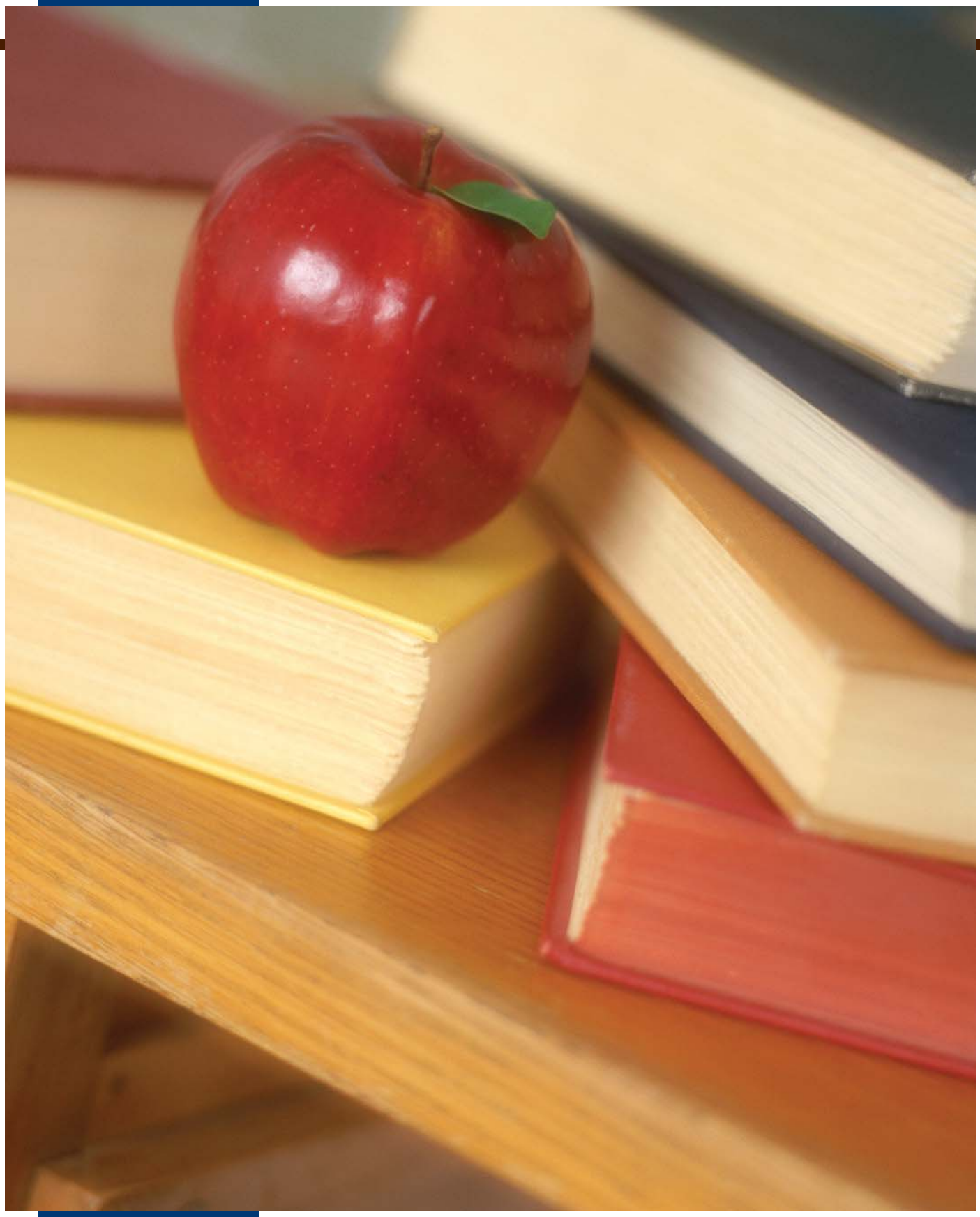
St. John, E.P., Musoba. G.D., and C.-G. Chung. 2004. *Academic Preparation and College Success: Analyses of Indiana's 2000 High School Class*. IPAS Research Report #04-03, Prepared for the Indiana Commission for Higher Education and the Lumina Foundation for Education.

Swail, W.S. and L.W. Perna. 2001. "A View of the Landscape: Results of The National Survey of Outreach Programs." *2001 Outreach Program Handbook*. New York, NY: The College Board.

Tafel, J. and N. Eberhart. 1999. *States School-College (K-16) Partnerships to Improve Student Performance*. Denver, CO: State Higher Education Executive Officers.

Tierney, W.G. and L.S. Hagedorn, eds. 2002. *Increasing Access to College: Extending Possibilities for all Students*. Albany, NY: State University of New York Press.

Venezia, A., Kirst, M.W., and A. Antonio. 2003. *Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations*. Stanford, CA: Stanford Institute for Higher Education Research.



Curriculum & Assessment Systems

By Sharmila Basu Conger and Christine Tell

The disconnect – in both academic expectations and performance – between our secondary and postsecondary education systems is increasingly recognized as a significant barrier to student success in the United States. For most of our nation's history, the mission of the K-12 public school system was to provide a solid general education that would serve the basic needs of all citizens, most of whom would never attend college. In contrast, the mission of our higher education system was to provide more extensive education and professional training to a select group – those whose aptitude and achievement levels "merited" pursuing further study. Since World War II, at least, high school has been for "everybody," while college has been for the select few.

Today, the growing importance of higher education for success in life and work has made the historic disparity of missions obsolete. Career readiness and college readiness have become fundamentally the same; to earn a living wage with prospect for advancement, even those not pursuing a college education will need to graduate from high school with knowledge and skills equivalent to those of the college bound. The academic gap between high school graduation and college- and work-readiness must be bridged, and the bridge must be built from both sides of the gap.

While change has been spotty, both public understanding of the importance of high school to college alignment and the advancement of a supportive policy environment have progressed positively and rapidly in the last decade. Today, a national consensus on a rigorous system of high school graduation standards, curriculum, and assessments aligned with college-readiness seems far less elusive than it was even a few years ago.

National and State Momentum Builds for "Closing the Expectations Gap"

When the nation's governors gathered in 2005 for the National Education Summit on High Schools, cosponsored by Achieve and the National Governors Association, they were confronted with a litany of data documenting the failure of the American high school to prepare students for the demands of college and work:

- Three-quarters of high school graduates go on to college, yet nearly a third immediately require remediation because they lack basic reading, writing, and math skills.
- One out of every four students enrolled in a 4-year college and nearly half of all community college students do not return after the first year, and far fewer earn 2- or 4-year degrees in a timely fashion.
- Surveys of recent high school graduates reveal that some 40 percent of those in college, and 45 percent of those in the workforce, recognize they have significant gaps in the skills they need to succeed (Peter D. Hart Research Associates, 2005).

The expectations for what high school students must learn do not reflect the knowledge and skills they will need to succeed in college and work.

Achieve's conclusions from five years of research as part of the American Diploma Project (ADP) confirmed Bill Gates's opening Summit declaration that "our high schools are obsolete." Specifically, Achieve has learned from college faculty and employers that the expectations for what high school students must learn do not reflect the knowledge and skills they will need to succeed in college and work. Because academic standards for high school students do not reflect college admissions and placement requirements, the content of courses taken to earn a high school diploma is largely disconnected from what it takes for graduates to compete beyond high school – either in the college classroom or in the workplace (Achieve, 2004b). Further, high school exit exams, often set at the tenth- or even the eighth-grade level, provide an inadequate diagnostic for post-high school success (Achieve, 2004a). Taken together, the mismatch of standards, curriculum, and assessments between K-12 and postsecondary means that students often get conflicting signals about what constitutes adequate preparation.

The conversation at the National Education Summit on High Schools was framed within the context of an agenda focused on college and work preparedness, "An Action Agenda for Improving America's High Schools." This agenda called for states to provide all students with qualified teachers, a rigorous high school curriculum anchored in college- and work-ready standards and assessments, and the support necessary to reach standards. Governors, legislators and educators were challenged to monitor student progress throughout K-16, increase high school graduation rates, and hold themselves accountable for results (Achieve and NGA, 2005). Many left the summit committed to taking action in their states.

States Adopt a Common Policy Agenda to Close the Expectations Gap

Over the last two years, 29 states – educating more than half of America's public school students – have joined the American Diploma Project (ADP) Network. State leadership from governors' offices, K-12, postsecondary, and business formed the ADP Network to help build political will and advocate for policies which ensure that students leave high school prepared for college and work (Achieve, 2006).

Admission to the ADP Network requires the commitment of state leaders to align the expectations for graduating from high school with the demands of college and work. Specifically, the ADP Network states have committed to taking action on four policy priorities:

- **Aligning high school standards with the knowledge and skills required for success after high school.** This requires anchoring high school standards to real-world college and workplace expectations.
- **Requiring all graduates to take rigorous courses, aligned with state standards that prepare them for life after high school.** ADP calls for four years of grade-level English, including literature, writing, reasoning, logic, and communications skills; and four years of math, including courses that cover the content typically found in Algebra I and II, geometry, data analysis, and statistics.
- **Streamlining the assessment system so that the tests students take in high school also can serve as placement tests for college.** This means that states should give all high school students an assessment – before their senior year – that measures readiness for credit-bearing postsecondary courses and 21st century jobs. Such assessments should enable schools to fill learning gaps prior to graduation, reduce the need for remediation, eliminate unnecessary tests, and increase the likelihood of postsecondary and workplace success.
- **Holding high schools accountable for graduating students who are ready for college or careers, and holding postsecondary institutions accountable for students' success once enrolled.** To do this, states must develop longitudinal data systems that track individual student progress and support effective transitions from secondary to postsecondary education and beyond.

Each state develops its own plan to carry out the shared policy agenda. Nationally, with Gates Foundation support, the leaders of the American Council on Education (ACE), the National Association of System Heads (NASH), and the State Higher Education Executive Officers (SHEEO) have joined with Achieve to promote higher education involvement in each ADP Network state's policy agenda (Cohen et al., 2006).

ACE, NASH, SHEEO, and Achieve cosponsored the National Higher Education Leadership Summit in January 2007 to focus conversation on the critical need for leadership to bridge the expectations gap (American Council on Education, 2007). In his

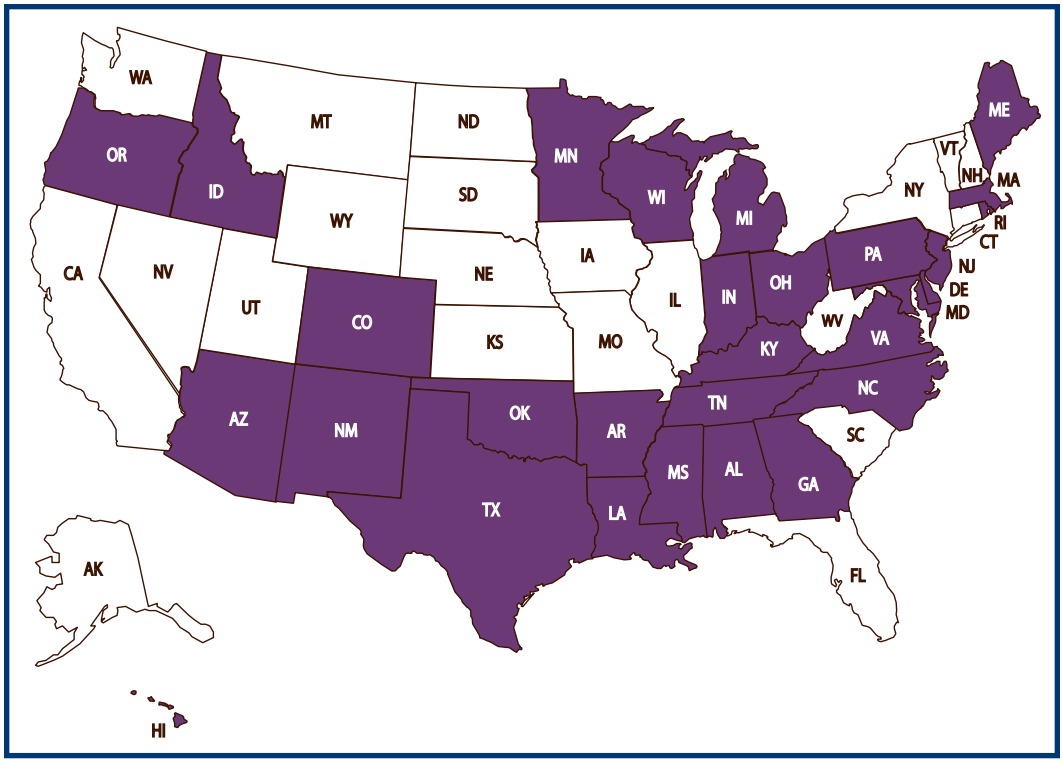


Figure 1: States in the ADP Network

opening address, Craig R. Barrett, Chairman of the Board of Intel Corporation, compared the present position of higher education in the United States to the decline suffered by the semiconductor industry in the 1970s. Functioning as highly autonomous entities, these industry heads shared no "common standards, specifications or understandings" for input resources. However, by working collaboratively with each other and their suppliers, these leaders were able to create standards across their industry, which helped the industry recover and surpass its prior market share. The corollary to postsecondary education was clear: ignoring postsecondary's role in establishing quality assurance measures for their "input resource" (graduating high school seniors), puts their own "end product" (postsecondary student success) in jeopardy.

Progress on State Action to Close the Expectation Gap

The findings of Achieve's 50 state survey (2007) suggest that state K-12 systems have made progress since 2003 in increasing the rigor of standards, curriculum, and assessments for high school graduation (Achieve, 2007b). Concurrently, postsecondary institutions within some states have taken the initiative to identify common college-readiness benchmarks. While these gains are laudable, sustainable improvements in each of the four ADP policy areas – critical to the success of P-16 systems – can only be realized through close collaboration between both K-12 and higher education.

Area 1: Align high school standards with postsecondary and workplace expectations.

The K-12 public education systems in all Network states have established academic standards intended to represent statewide consensus of the knowledge and skills to which elementary, middle, and high schools should teach and assess. However, because state and national accountability measures did not target "college- and work-ready" expectations, neither business nor postsecondary sectors were consulted for input in the K-12 standards-setting process. Consequently, the resulting state high school exit standards often do not reflect the needs of postsecondary education or employers.

In 2004, through the ADP initiative, Achieve conducted a national study with postsecondary and business leaders to identify benchmarks in English and mathematics around the core knowledge and skills both regarded as essential for all high school graduates (Achieve, 2004c). The resulting mathematics benchmarks reflect content typically taught in Algebra I, Algebra II, and geometry, as well as data analysis and statistics. The English benchmarks include literature, reasoning, logic, and writing and communications skills critical to college learning and most 21st-century jobs. These benchmarks have served as a starting point for formal gap analysis and work towards alignment in ADP network states.

> Sustainable improvements can only be realized through close collaboration between both K-12 and higher education.

To date, 19 states have utilized this process to align high school exit standards with the demands of college and work. The state work is conducted by State Alignment Teams, including representatives from K-12, 2- and 4-year postsecondary institutions, and the business community. The resulting aligned standards improve the chances that students in the state:

- Enter into credit-bearing coursework in 2- or 4-year colleges, without the need for remediation and with a strong chance for earning credit toward their program or degree; and
- Gain entry-level positions in quality job and career pathways, which often require further education and training.

In turn, the State Alignment Teams conduct outreach activities with peers in their states. This approach allows team members to work separately with their individual sector leaders, yet produce one set of academic standards for college and work that is:

- Adopted by the **state board of education** or other appropriate governing body as defining the knowledge and skills in math and English that all students should meet by the end of high school;

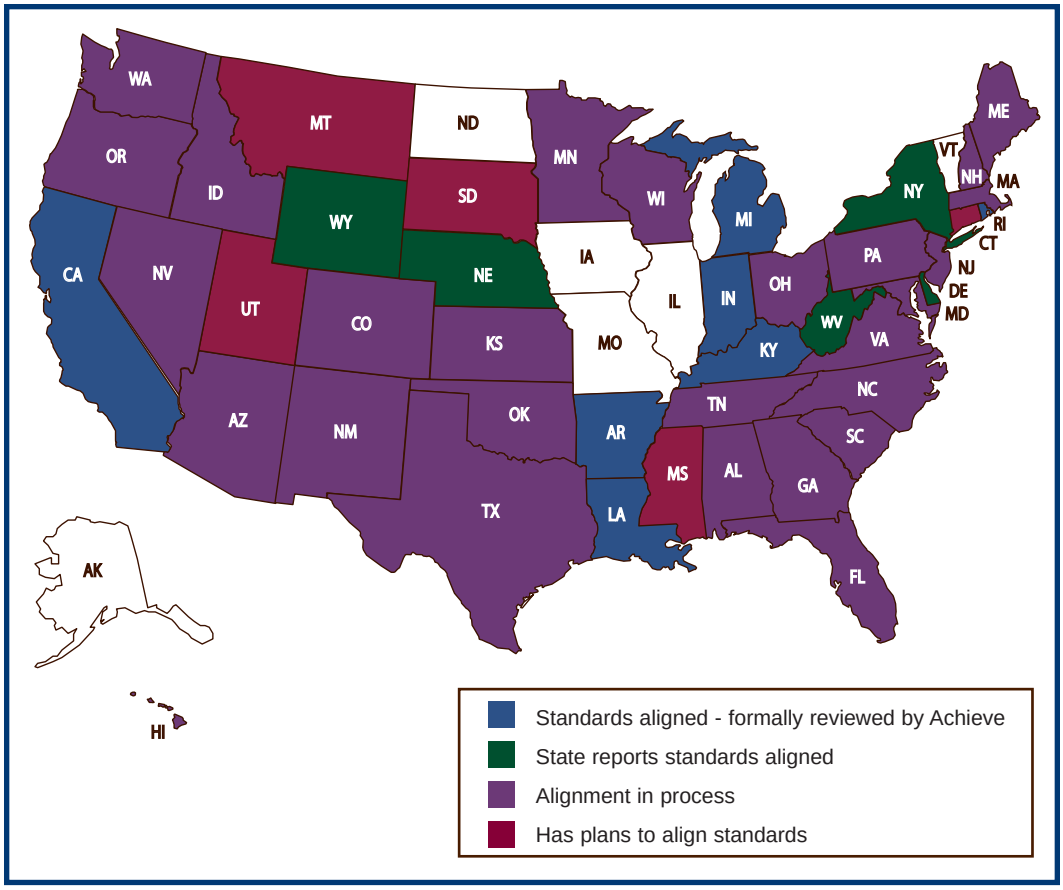


Figure 2: States Aligning High School Standards with Postsecondary and Workplace Expectations

- Adopted, endorsed, or otherwise recognized by **state postsecondary institutions** as defining the knowledge and skills necessary for placement into credit-bearing courses; and,
- Verified or endorsed by the **business community** as constituting skills necessary to enter and succeed in the 21st-century workplace.

In 2003, Somerville and Yi reported from the results of their survey that no state had come to consensus on the content or topics of high school coursework that would indicate college readiness (Somerville and Yi, 2003). Four years later, Achieve followed up with a survey asking states whether they had since gone through a formal process to align high school academic standards in mathematics and English with the skills necessary for both entry into credit-bearing college courses and success in entry-level, quality jobs. Of 50 states responding to this question:

- Twelve reported that their high school standards were aligned with real-world expectations. In seven of these states, Achieve formally verified the alignment of these standards with the ADP benchmarks;
- Twenty-seven indicated they were in the process of aligning their standards. Of these states, 16 are participating in the Achieve Alignment Institutes;
- Five planned to undertake an alignment process; and
- Only six states still had no plans to align high school expectations with those of college and work (Achieve, 2007b).

Area 2: Require all high school students to take a rigorous curriculum aligned with standards in order to graduate prepared for college and work.

In their 2003 report on the status of curriculum and assessment in P-16 systems, Somerville and Yi cited the lack of consensus between K-12 and postsecondary regarding which courses high school students should take to prepare for college. In most states, consensus on high school graduation requirements was defined by traditional Carnegie units, e.g., three years of mathematics, rather than rigorous content that reflected college- and work-ready requirements. At that time, only two states required high school students to complete Algebra II for graduation, while 28 of the 30 states with statewide admission agreements required entering freshman students to have successfully completed Algebra II (Somerville and Yi, 2003).

Fortunately, there is now growing evidence that we are moving away from the culture of low expectations.

Aggravating the mismatch of expectations between sectors was a lack of consensus within each sector. Both across and within states, little agreement was found among high schools as to the content and rigor of courses high school students needed to graduate "college-ready." Likewise, little agreement existed among higher education institutions regarding a high school curriculum that would adequately prepare students for placement in credit-bearing college courses. Research to date shows that high expectations matter; yet few states were encouraging, much less requiring, a strong core curriculum for high school students (The Education Trust, 2005). The combination of low expectations for high school graduation and contradictory signals about readiness from K-12 and post-secondary suggests that educators from both sectors, as well as state policy leaders, have created a culture which implicitly, if unintentionally, fosters inadequate preparation for college.

Recent national studies confirm that student achievement has suffered as a result. Only 51 percent of students tested by ACT in 2005 were assessed ready for college-level reading. Alarmingly, more students were on track for college-level reading in the eighth and tenth-grades than were actually ready in the twelfth-grade (ACT, 2006). That same year,

surveys of recent high school graduates revealed that some 65 percent of those in college, and 77 percent of those in the workforce, would have taken more rigorous coursework while in high school if they had known what would be required in their first year college or work (Peter D. Hart Research Associates, 2005). The following year, research from the U.S. Department of Education confirmed that, over the last decade, completion of a rigorous college preparatory curriculum in high school had been a better predictor of college success than test scores or high school grades (Adelman, 2006).

Fortunately, there is now growing evidence that we are moving away from the culture of low expectations. The 29 states that have joined the Achieve ADP Network have committed to increasing high school graduation requirements to address the English and mathematics benchmarks that students must master in order to be prepared for entry into credit-bearing college coursework and quality jobs. The Achieve ADP benchmarks help states move away from Carnegie-unit requirements to content based on aligned standards. The ADP-recommended college and work-ready achievement levels consist of four years of grade-level English, including literature, writing, reasoning, logic, and communication skills, and four years of mathematics, covering the content typically taught in Algebra I, Algebra II, Geometry, data analysis, and statistics (Achieve, 2004c).

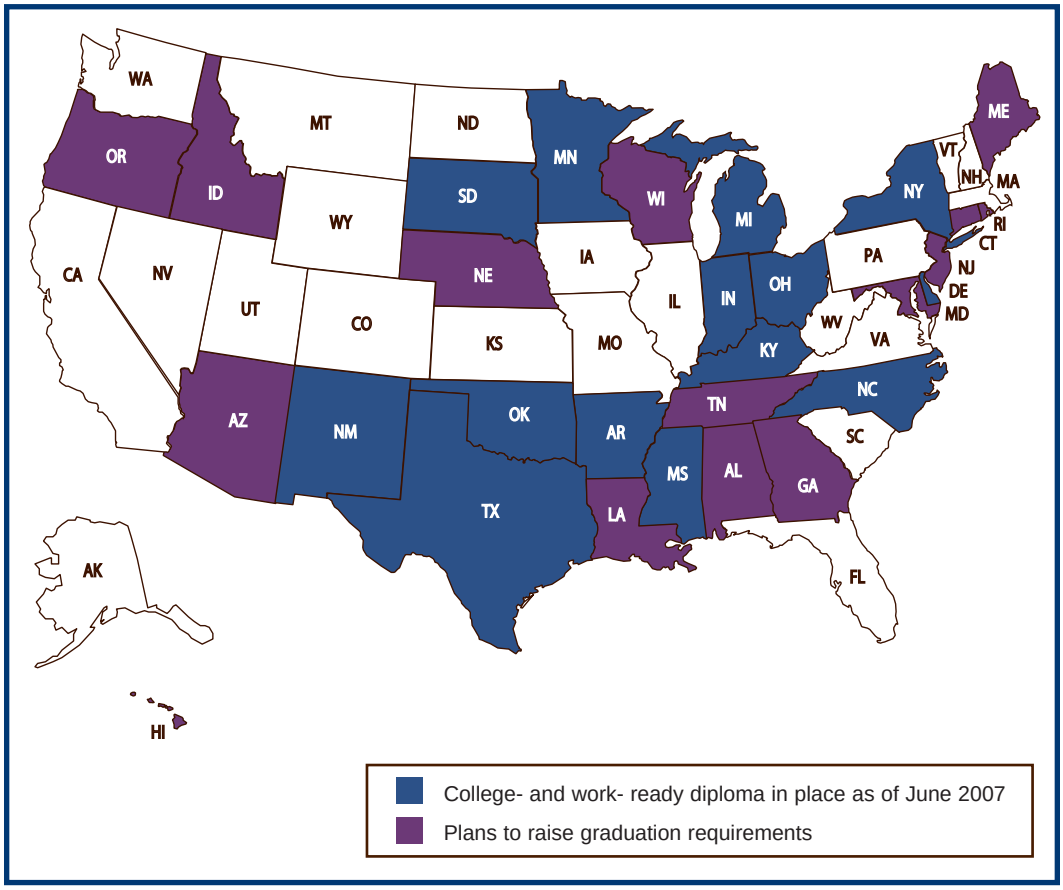


Figure 3: States Requiring a College- and Work- Ready Diploma

Twenty-four states, 16 of which are part of the ADP Network, are participating in the State Scholars Initiative (SSI), a national program that partners businesses with secondary schools to better prepare students for success in college and the workplace. In SSI states, local business leaders encourage middle school students to complete rigorous high school curricula that include four years of English, three of math (including Algebra 2), three of lab science (biology, chemistry, physics), three and a half of social studies, and two years of a foreign language. This critical business/education partnership helps students to make a real-world connection between academic excellence and success in the workplace (Western Interstate Commission for Higher Education, 2006).

Some states have tied completion of a rigorous high school curriculum to financial assistance for college.

Recognizing the link between adequate preparation and college success, some states have tied completion of a rigorous high school curriculum to financial assistance for college. Recent Federal action, following the recommendations of the U.S. Secretary of Education's Commission on the Future of Higher Education, has reinforced such state action. The new Federal Academic Competitiveness Grants program allocates extra funds to Pell Grant recipients who are full-time students and have successfully completed a college preparatory curriculum in high school. This program, available for the first time in the 2006-07 school year, provides up to $750 for the first year of undergraduate study and up to $1,300 for the second year of undergraduate study in addition to the student's Pell Grant award (U.S. Department of Education, 2006).

Four years after Somerville and Yi's survey of mathematics requirements, Achieve asked states if all high school graduates were required to complete a rigorous high school curriculum (at the Achieve ADP level). Of 50 states responding to this question:

- Fourteen require students to complete a college- and work-ready curriculum (at the Achieve ADP level); and
- Seventeen report plans to adopt rigorous graduation requirements in the next few years (Achieve, 2007b).

Progress in strengthening high school graduation standards to meet the threshold of college readiness has quite naturally encountered resistance from those who worry that tougher standards will increase drop-out and failure rates. Some states, such as Texas, have found it easier to implement truly rigorous curricular standards by making those standards part of the "default" curriculum rather than a mandatory one. Students, with parental permission and after counseling, can opt out of a rigorous curriculum, but only after explicitly considering the consequences of lower aspirations (Western Interstate Commission for Higher Education, 2007).

Area 3: Streamline the assessment system so that tests students take in high school also serve as placement tests for college.

Students have historically faced three disparate sets of high-stakes assessments at the juncture between high school and college. State high school *exit* exams, which students must pass to receive a diploma, tend to measure student achievement on mid-level (eigth thru tenth-grade) high school coursework. College *entrance* exams, serving as gate-keepers to postsecondary education, are developed by third parties (ETS or the College Board) to measure aptitude and general skills. Meanwhile, college *placement* exams, developed individually by higher education institutions to place students at the appropriate course level, measure different levels of different skills than either high school exit exams or college entrance exams (Achieve, 2007a). This disharmonious array of exams hampers student transitions from high school to college.

Unfortunately, when students fail to effectively navigate these hurdles, they often pay a steep price. Students who find out post-matriculation that they are not ready to be placed in college-level courses face wasted semesters of remedial work at full college prices. Further, recent research indicates that 60 percent of students who take even a single remedial course in reading have failed to go on to complete a baccalaureate degree (Adelman, 2004). Policy organizations such as SHEEO, The Education Trust, Achieve, Pathways to College, and others have stressed the critical need for states to come to agreement on a single assessment – one based on aligned standards rigorous enough to indicate college readiness – in order to ease this transition point for students and to reduce remediation.

Policy organizations have stressed the critical need for states to come to agreement on a single assessment to ease the high school-to-college transition point for students and to reduce remediation.

To date, states have made considerably less progress on the assessment front than on aligning high school standards and curriculum with college and work requirements. However, a growing number of states have placed this issue on their agenda, and are currently working on embedding college-readiness indicators in their high school assessments. Three alignment models are emerging from this state work: using high school end-of-course exams to measure college readiness; setting a college-ready "cut score" on existing comprehensive state high school exams; and incorporating college admissions tests (ACT or SAT) into high school assessment systems. The goal with each of these models is to create and utilize a single exam that both aligns with high school exit standards and effectively measures college and work preparedness (Achieve, 2007b).

It is too early to tell which of these methods will prove to be most effective; however, progress is being made by the states in each of these areas. The clear leader in the use

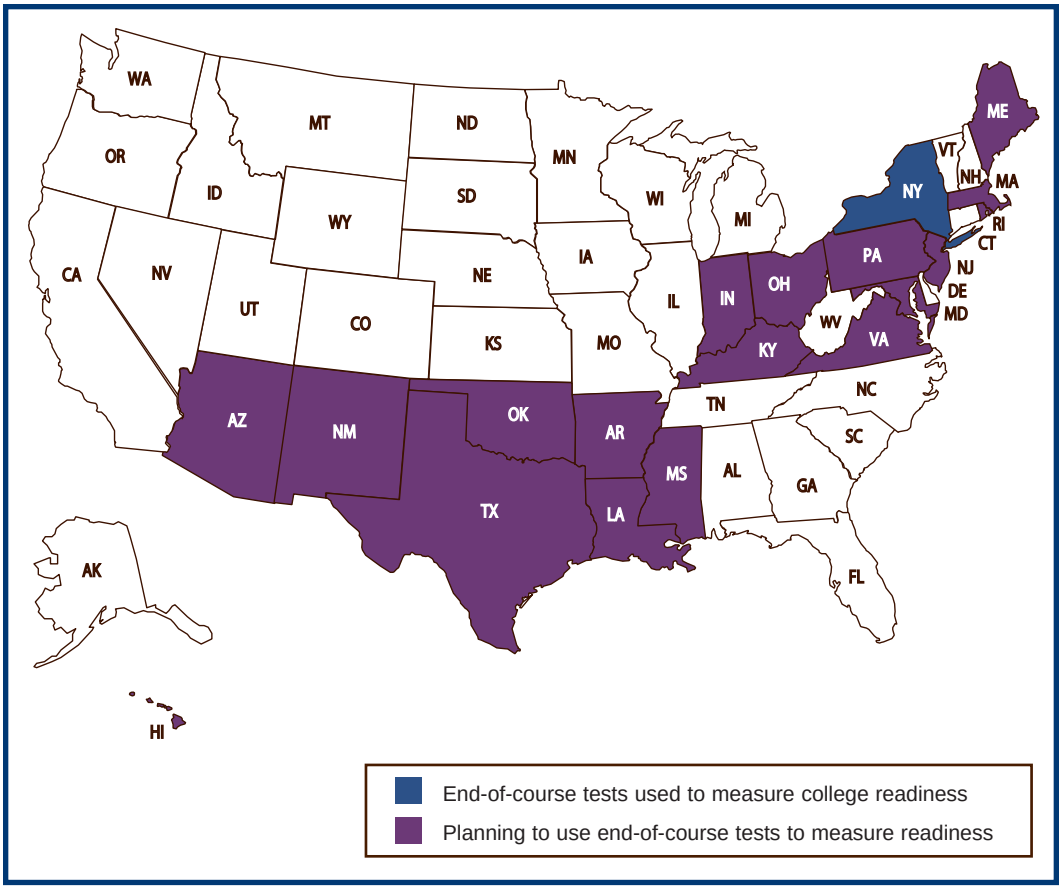


Figure 4: States Using End-Of-Course Exams to Measure College Readiness

of end-of-course exams is New York State, where postsecondary institutions of both the City University of New York (CUNY) and the State University of New York (SUNY) use scores on the state's end-of-course high school tests – the Regents Exam – to determine whether students are ready to take credit-bearing courses in the university system. Eighteen other states are now considering or developing end-of-course exams that would simultaneously meet eleventh-grade achievement standards and signal college readiness. In a current effort spearheaded by Achieve, nine states are working together to develop a common Algebra II exam. Based on the ADP aligned high school exit and college entrance standards, this exam will be designed to assess a student's ability to enter credit-bearing courses in mathematics without remediation.

On a different path to aligned assessments, some states are integrating college readiness indicators into their existing comprehensive high school exit exam. The California State University (CSU) system worked with the state's education department to design exam questions in English and mathematics that align with high school standards and measure college readiness. These items were integrated into the state's eleventh-grade standards-based assessments, which can now be utilized as a placement exam for the CSU system.

The results from the modified eleventh-grade exams also give students advanced notice of their college-readiness status, allowing them the opportunity to remedy any shortcomings with coursework during the senior year.

Several states are following a third path to a common assessment: requiring all students statewide, not just the college-bound, to take the ACT or the SAT. These exams have traditionally held credibility for postsecondary institutions in making college entrance decisions. By incorporating these exams into high school exit requirements, participating states are making a strong statement about expectations of student achievement. However, since the ACT and SAT were not designed to align with state high school standards or ADP achievement benchmarks, states which use this method must augment these exams with additional items designed to capture student achievement over the full range of advanced concepts and skills.

In their 2003 report on the status of curriculum and assessment in P-16 systems, Somerville and Yi found only one state – New York – that had aligned assessments

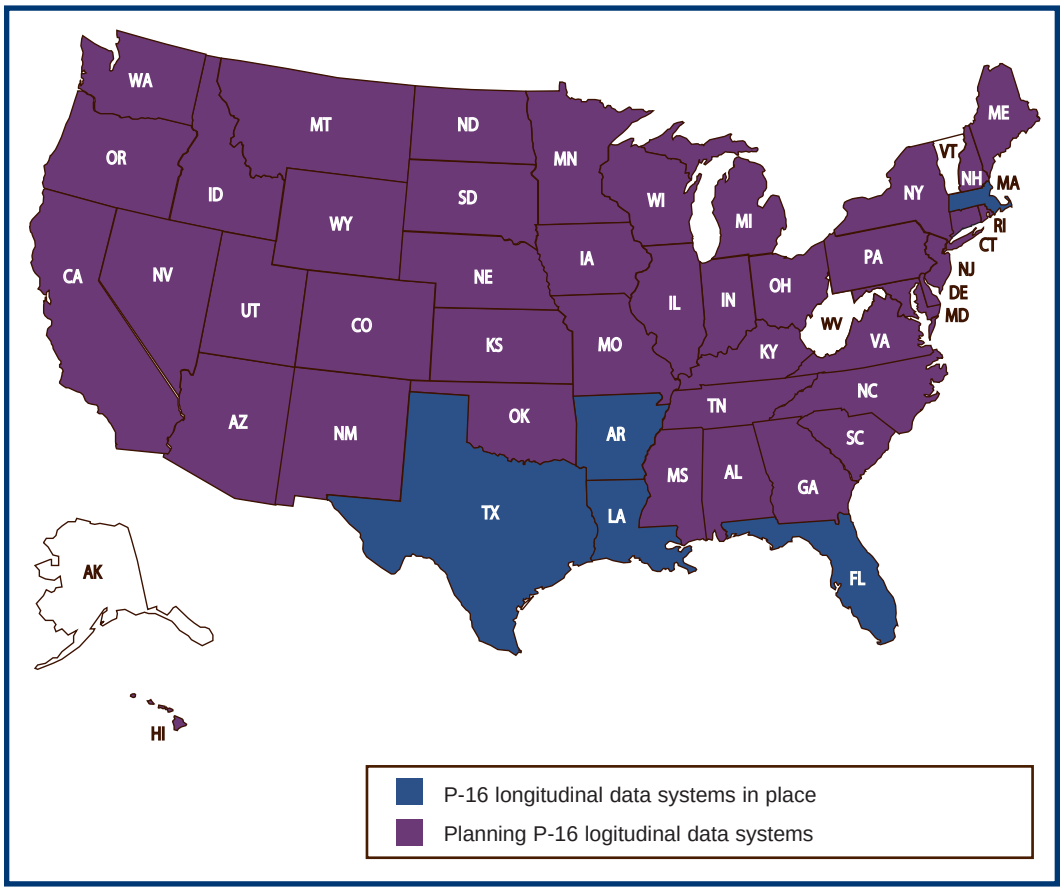


Figure 5: Status of P-16 Longitudinal Data Systems by States

between high school and college (2003). Four years later, Achieve asked states if they had aligned assessments in place. Of 50 states responding to this question:

- Nine currently administer statewide high school exams that can also be utilized by higher education institutions to place students in credit-bearing courses; and
- Twenty-one other states report plans to develop such assessments (Achieve, 2007b).

> In order for states to work effectively toward seamless P-16 systems, they must have the ability to track student progress through elementary, secondary, and postsecondary education as well as into the workforce.

Area 4: Hold high schools accountable for graduating students who are ready for college or careers – and hold postsecondary institutions accountable for students' success once enrolled.

As discussed, states are making slow but steady progress on aligning standards, curriculum, and assessments across the high school – college divide, thus easing transitions for students through their P-16 systems. The final piece of the puzzle lies in continuous improvement, which requires accurate assessment, reporting, and feedback. In order for states to work effectively toward seamless P-16 systems, they must have the ability to track student progress through elementary, secondary, and postsecondary education as well as into the workforce. The issues surrounding state development of the types of longitudinal data systems required to achieve this aim are discussed in detail in a following chapter of this volume, "Data and Assessment Systems."

States are making significant progress on the development of statewide P-16 data systems. In 2005, only three states reported having a longitudinal data system in place, and 31 additional states reported that they were working to establish such a system (Achieve, 2005). According to the latest Achieve survey, as well as information from the Data Quality Campaign (DQC) and the National Center for Higher Education Management Systems (NCHEMS), the current status of state longitudinal systems is as follows:

- Five states have online P-16 data systems capable of tracking students from kindergarten through college graduation;
- Eight states can match student records between K-12 and higher education, and have plans to build seamless data systems;
- Thirty-four states do not currently have the ability to match student records across educational systems, but have plans to build P-16 data capabilities; and
- Only three states do not yet have plans to develop longitudinal data systems (Achieve, 2007b).

Policy Recommendations

States should foster collaborative efforts between K-12 and postsecondary to align their standards, courses, and assessments, creating seamless, transparent systems for student transitions (Callan et al., 2006). We have divided our recommendations for states into each of these areas.

Standards

- Identify the specific mathematics and English entry-level courses on each 2- and 4-year campus in the state, and create consistency in the requirements for entry-level courses across campuses.
- Identify related postsecondary disciplines in the social sciences, science, and the arts, and determine whether the state's high school standards address the reading, writing, and mathematics skills required.
- Encourage K-12 and postsecondary institutions to collaboratively compare the state's high school standards with entry-level expectations for these courses, and forge agreements between the two sectors about the requirements for college-level study.
- Make necessary adjustments so that the state's high school standards in English and mathematics represent the essential knowledge and skills needed to be successful in entry-level, credit-bearing coursework at the majority of the state's 2- and 4-year institutions.

Curriculum

- Convene representative faculty from K-12 and postsecondary to review the state's proposed high school course graduation requirements, and ensure that the state's college-ready standards, representing knowledge and skills needed for credit-bearing college coursework, are embedded in those requirements.
- Provide K-12 educators with sample course syllabi and student assignments, projects, and assessments that illustrate the level of expectations for entry-level college coursework and a parallel set of tools from remedial courses that build students' college-ready skills.
- Foster collaborative efforts between K-12 and postsecondary to determine the right set of high school courses for success in higher education, and then base requirements for admission upon those courses.
- Make the college preparatory curriculum, built on aligned, college-ready standards, the "default" curriculum, rather than the "honors" curriculum, for high school graduation, ensuring high expectations for all students.
- Make the college preparatory curriculum a condition of eligibility for basic scholarship assistance or for merit scholarships.

Assessments

- Foster collaborative efforts between K-12 and postsecondary to align high school assessments of student ability with the qualifying examinations used by colleges and universities – particularly in the critical areas of mathematics and English-language skills.
- Incorporate end-of-course assessments to help assure consistent rigor and essential content across classrooms.
- Provide opportunities for students to take college-readiness examinations early in their high school career, giving students more of an opportunity to remedy any shortfalls.
- Streamline statewide assessment by encouraging postsecondary institutions to use aligned high school exit examinations for college entrance and placement decisions.

References

Achieve, Inc. 2004a. *Do Graduation Tests Measure Up?: A Closer Look at State High School Exit Exams*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2004b. *The Expectations Gap: A 50-State Review of High School Graduation Requirements*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2004c. *Ready or Not: Creating a High School Diploma That Counts*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2005. *Measuring What Matters: Creating a Longitudinal Data System To Improve Student Achievement*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2006. *Preparing Today's High School Students for Tomorrow's Opportunities*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2007a. *Aligned Expectations? A Closer Look at College Admissions and Placement Tests*. Washington, DC: Achieve, Inc.

Achieve, Inc. 2007b. *Closing the Expectations Gap 2007*. Washington, DC: Achieve, Inc.

Achieve, Inc. and the National Governors Association. 2005. *An Action Agenda for Improving America's High Schools*. Washington, DC: Achieve, Inc.

ACT. 2006. *Reading Between the Lines – What ACT Reveals about College Readiness in Reading*. Iowa City, IA: ACT.

Adelman, C. 2004. *Principal Indicators of Student Academic Histories in Postsecondary Education, 1972–2000*. Washington, DC: U.S. Department of Education.

Adelman, C. 2006. *The Toolbox Revisited: Paths to Degree Completion from High School through College*. Washington, DC: U.S. Department of Education.

American Council on Education. 2007. "National Leadership Summit Focuses on Improving High School Education." *Higher Education and National Affairs Online News*. Washington, D.C.: American Council on Education.

Callan, P.M., Finney, J.E., Kirst, M.W., Usdan, M.D. and A. Venezia. 2006. *Claiming Common Ground: State Policymaking for Improving College Readiness and Success*. San Jose, CA: National Center for Public Policy and Higher Education.

Cohen, M., Lingenfelter, P.E., Meredith, T.C., and Ward, D. 2006. *A Coordinated Effort to Prepare Students for College*. The Chronicle Review, vol. 53, no. 17.

The Education Trust. 2005. *Gaining Traction, Gaining Ground: How Some High Schools Accelerate Learning for Struggling Students*. Washington, DC: Education Trust.

Peter D. Hart Research Associates. 2005. *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* Washington, DC: Achieve, Inc.

Somerville, J. and Y. Yi. 2003. "Curriculum and Assessment Systems." *Student Success: Statewide P-16 Systems*. Denver, CO: State Higher Education Executive Officers.

U.S. Department of Education. 2006. *Information For Students About Academic Competitiveness and National SMART Grants*. Washington, DC: U.S. Department of Education.

Western Interstate Commission for Higher Education. 2006. *State Scholars Initiative 2006 Year In Review*. Boulder, CO: Western Interstate Commission for Higher Education.

Western Interstate Commission for Higher Education. 2007. *SSI Policy Update: Graduation Requirements vs. "Default" Curriculum: What's the Difference?* Boulder, CO: Western Interstate Commission for Higher Education.

esson #5

High Quality Teaching

By Edward Crowe

The "No Child Left Behind Act," which in 2001 passed Congress with large bi-partisan majorities, has propelled important changes in K-12 education over the past four years. Provisions of this legislation – holding states, school districts, and schools accountable for the academic achievement of all students – have reshaped public policy in American education. Even though most school funding and legal responsibility for K-12 education resides with the states, federal policy has forced massive changes on the states.

The act mandates, for example, that schools demonstrate "annual yearly progress" in student achievement and that achievement scores for demographic sub-groups of pupils be compared in order to shed light on the "achievement gap." It also mandates that every student have a "highly qualified teacher."

Although good teaching is essential to the success of *No Child Left Behind*, the topic of teacher education received scant attention in a recent report released by the U. S. Department of Education. The 2006 report of the Commission on the Future of Higher Education, released by U.S. Secretary of Education Margaret Spellings, clearly elucidated the growing movement to apply accountability principles to higher education but makes only two brief mentions of "teacher education."

Did this report on higher education in the 21st century miss a chance to connect high-profile education policy and the role of colleges and universities? Does it signal a consensus in the policy world that higher education is irrelevant to schooling and school reform? The premise of this policy brief is that higher education systems, state agencies, and institutions are important players in a state's teacher-preparation system. Other entities play significant roles as well, including state departments of education, professional standards boards, regional and local K-12 agencies, legislators, governors, and community groups. Committed leaders and organizations can meet the promise of excellent teaching for every child, but their success in this vital endeavor will require sustained attention to the P-16 issues addressed below.

Higher education's track record of engagement is not a promising indicator of future success in these endeavors. Since 2003, the number of alternative teacher preparation programs has grown significantly. School districts, charter networks, and other providers have become important sources of new teachers for American schools. More and more universities are "playing both sides of the aisle," creating alternate routes as well as maintaining their traditional preparation programs. Perhaps the most interesting development – and a harbinger of the future – is establishment

of the proprietary, for-profit American College of Education in Chicago, which is fully accredited by the North Central Association and provides graduate education to teaching professionals in partnership with public schools.

In sum, policy leaders and the private sector – skeptical of the willingness of universities to stay the course – are turning away from university-based teacher education programs. Concerns about program quality have not been alleviated by the teacher education community or by the evidence from the federal Title II "report cards." If higher education is to rise to the large challenge of improving learning outcomes for K-12 students through well-designed P-16 efforts, some key issues must be addressed. Responding to each will require solid school-university connections.

The following steps would seem to be essential.

Build a base of scientific knowledge by using reliable and valid evidence to design and assess all preparation pathways; focus on measurable outcomes of teaching performance, pupil learning, and academic achievement gains.

Take steps to make teaching a clinical-practice profession by employing faculty with clinical expertise, moving more of the preparation program to clinical sites, and using reliable and valid measures of teaching performance.

Establish quality control for programs and their graduates by advocating and enforcing real performance standards for all programs and tough licensure standards for all graduates.

None of these steps are currently being taken in any systematic way.

Improving teacher education by concentrating on scientifically based evidence of teaching and learning outcomes requires universities, schools, and states to work together.

Improving teacher education by concentrating on scientifically based evidence of teaching and learning outcomes requires universities, schools, and states to work together. Knowing what to do is not the missing ingredient. What is lacking is rather the political will to begin the change process and sustain it over a long period of time.

This policy brief will highlight key issues, strategies, and policy levers. Along the way it will point to states or systems implementing what appear to be good policies and practices. It offers recommendations and suggestions to states to guide or jump-start effective reforms. It also considers some emerging issues that create opportunities for – and pose significant threats to – higher education.

Research published in the last few years makes a compelling empirical case that the quality of teaching has a profound and lasting effect on K-12 student learning. If teachers do, in fact, make a difference – as most parents and students have always believed – and if most new teachers in the United States will, for the foreseeable future, come from college and university preparation programs, then the higher education community has a wonderful opportunity to make good on the promise of providing future generations of Americans with the education they need to succeed. The problem is that so little improvement has actually occurred in the preparation of teachers. The hope is that by acting systemically, states can do better so children will do better.

Equipping teachers and administrators with the knowledge and skills they need to be effective in this context has led to campus-based and system-wide reforms of teacher preparation programs.

What is High Quality Teaching?

States that are making progress in giving every child access to excellent teaching usually start with a firm focus on K-12 student learning goals and challenges. Generally, K-12 standards and student performance on assessment tests frame a state's approach to improving teaching quality. North Carolina, for instance, has set school performance and improvement goals based on student assessments. Equipping teachers and administrators with the knowledge and skills they need to be effective in this context has led to campus-based and system-wide reforms of teacher preparation programs. In Louisiana, a realistic view of what all students are able to do – matched with what education and business leaders believe they ought to be able to do – is driving a comprehensive teacher-quality policy effort.

The next step is to think clearly about the skills and abilities teachers need to help students achieve at high levels. This alignment of student and teacher standards is a basic building block of coherent state policy. It is most effective when it becomes the basis of activities and policies associated with education, accreditation, and licensure. In the literature of professionalization, these three are regarded as the most important components of credentialing, an indispensable source of professional legitimacy. Rigor and consistency of training, particularly when that training claims a basis in scientific knowledge, helps to confer professional status on those who complete the training process, especially when all members of the profession experience the same regimen of training. In this sense, “teacher certification is a means to an end” (Imig and Imig, 2007).

Credentialing as a source of professional legitimacy also includes the receipt of degrees or certificates by individual members of the profession, licensure by the state, and accreditation of education programs by some external organization. Thus, credentialing

involves “three sets of organized stakeholders – educational sites, accreditation agencies, and government institutions” (Begun and Lippincott, 1993). A robust definition of high quality teaching makes all the difference here. The recent report of the National Commission on Teaching and America's Future (NCTAF), *No Dream Denied: A Pledge to America's Children* (2003), offers a comprehensive definition of high quality teaching (www.nctaf.org). While there is ongoing national debate about whether a mastery of subject matter in itself can produce good teaching (Paige, 2002), most states recognize that teachers need both a thorough command of subject matter and a deep understanding of how to teach content to students with different learning styles. A state that has reached some consensus about the elements of high quality teaching can then begin to audit its educational policies to see how the definition is embedded in:

- Licensing standards;
- Teacher tests;
- Criteria for approving preparation programs;
- Induction program design;
- Content of teacher preparation programs; and
- Professional development policies and practices.

How Can States Promote High Quality Teaching?

State policies on teacher quality should be built on core elements of excellent teaching and the preparation of high quality teachers. These descriptors of high quality preparation apply to traditional and "alternative" programs, even if the programs have different ways of incorporating elements of quality into their design.

Prospective teachers must develop a strong foundation of knowledge in the subjects they are preparing to teach.

- College and university preparation programs must do much more to ensure that their graduates have mastered the content of the subjects they will teach.
- State higher education policy can help make it possible for arts and sciences faculty to be deeply involved in program redesign and implementation, in close collaboration with education faculty. At the same time, senior campus leaders must be strongly committed to the success of this collaboration.

Teacher candidates must also learn how to teach their subjects. The science of child development and how children learn ought to be mastered and tested before candidates are licensed, and be at the core of mentoring and induction programs.

- Developing and acquiring these skills calls for close partnerships between higher education institutions and schools.
- It also requires engagement of arts and sciences faculty.

One component of good teaching is that teachers know how to use assessment data to gauge a student's progress. Teachers must be able to integrate this information into their content knowledge and teaching skills to respond to individual learning needs.

- The integral role of data in assessing teaching and learning entails new strategies for collecting and sharing data between schools and preparation programs. Preparation programs must build continuous improvement mechanisms that are driven by regular use of these data.
- Making sure that decisions are based on evidence requires greater collaboration among all faculty engaged in preparing teachers, as well as closer ties between preparation programs and schools where students are assessed.
- Improved accountability systems at the state level that generate and share the relevant information are essential to basing decisions on evidence.
- Each of these steps calls for rethinking university policies and practices in ways that institutional leaders must lead and support.

Each of these steps calls for rethinking university policies and practices in ways that institutional leaders must lead and support.

Student teachers need well-designed and extensive clinical experiences so that the challenges of effective teaching are familiar to them as new teachers.

- A real school-university partnership built on mutual respect and shared goals is crucial.
- As the Carnegie Corporation emphasizes in *Teachers for a New Era* (2001), "Excellent teaching is a clinical skill… Clinical practice in schools takes place in complex public environments and entails interaction with pupils, colleagues, administrators, families and communities… Exemplary teacher education provides for clinical education in a clinical setting." Without the integration of knowledge and skills achieved in carefully supervised clinical practice, the education and training of new teachers is incomplete.
- The lack of clinical skills and solid clinical experience contributes to the high levels of burnout and turnover of new teachers.

The effective integration of technology into curriculum and instructional practices on the university campus is essential – teachers must know how to use technology successfully in teaching and assessment.

- Among other things, incorporating technology calls for professional development for university faculty, access to technology by faculty and students, and appropriate curriculum redesign.
- An important result of progress in this area is the potential for technology, used wisely, to increase student engagement in learning, promote greater access to high quality content and curriculum, and foster more effective learning by K-12 students.

As more states develop the capacity to link students' testing data with information about their teachers, it will be possible to do a better job of measuring program strength by the learning gains of students taught by program graduates.

Because successful teaching practices develop over time, new graduates need extensive mentoring and support for the first few years of their careers. Many observers believe that these programs reduce rates of teacher turnover and promote teacher career development.

- Successful mentoring and induction programs require close collaboration between higher education and K-12 schools.
- Higher education must be willing (and funded) to accept extended responsibility for program graduates. This principle applies equally to all alternate pathway providers.
- Redesigned school practices are also needed to foster effective mentoring.

Many state licensure systems now recognize the importance of the novice period in a teacher's career by establishing mentoring and induction periods and granting an initial or provisional license. The idea is to promote skills development through effective support strategies. Some states even fund compensated time in which new teachers reflect on their experience, consult with mentors, and have their growth and development periodically assessed. As university-based preparation programs are being asked to take on extended responsibilities during this stage of preparing new teachers, good partnerships between universities and schools (and often state assessment officials as well) are vital.

Program accountability should apply to all parts of the university involved in teacher preparation. Meaningful accountability measures outcomes to determine whether a program is producing good teachers. It also specifies rewards and sanctions for programs, how accountability measures apply to arts and sciences as well as education, and the role senior university leaders play in implementing accountability policies.

- The Carnegie Corporation's Teachers for a New Era program, drawing on the work of Sanders and others (1995, 1996; Wright et al. 1997), requires its grantees "to evaluate the ongoing effectiveness of the teacher education program based in part on evidence of pupil learning that has occurred under the tutelage of teachers who are graduates of the program." This is meaningful accountability because it promotes the use of real outcomes data for diagnosis and program improvement.
- As more states develop the capacity to link student testing data with information about the teachers of each K-12 student, it will be possible to do a better job of measuring program strength by the learning gains of students taught by program graduates. The Elementary and Secondary Education Act (ESEA) will advance the day when this linkage is possible in every state through its focus on regular testing of K-12 students.
- The federal Title II "report cards" for institutions and states are a start in the accountability process, but states, higher education institutions, accrediting bodies, and school districts need to make serious efforts to use these and other data.
- Information available through the National Council for Accreditation of Teacher Education (NCATE) and the Teacher Education Accrediting Commission (TEAC) can provide additional invaluable insights for designing strategies for continuous improvement.

P-16 Is Essential for Teacher Quality Improvements

Although this brief focuses on teacher quality, how states deal with the five other issues SHEEO examined in state visits during the 2001-2002 academic year can make a big difference to the success of teacher quality policies.

Early outreach programs require high quality teaching to be effective. Students who need early outreach programs are often enrolled in schools that do not get – and cannot keep – the best teachers. Stronger state preparation programs are essential to institutionalize the benefits of early outreach. Over time students who benefit from successful early outreach programs can be strong recruits into teacher preparation programs.

Curriculum and assessment reform driven by commitment to standards-based education also depends on improving teacher quality. Aligning student and teacher standards is necessary here as well, as is using assessments as diagnostic tools at the school and classroom levels. Teachers must be able to shape their teaching to the needs of students with varied learning styles and ability levels.

Financial aid programs often are used to attract new candidates to teaching. The proliferation of small programs with a huge range of policy objectives, however, can work at cross-purposes with other state goals. Financial inducements to prospective teachers overlook the impact on teacher retention that good preparation and better working conditions can have.

Data and accountability systems are essential to understanding how the current system does – or more likely does not – produce teachers able to help all students succeed. Good data systems can track K-12 student transitions across levels of the system, enabling policymakers to detect and address problems related to teacher preparation, professional development, and support systems.

State leadership is crucial to progress on teaching quality. The many challenges include initial engagement, staying power, and the effect of leadership transitions on policy continuity. The many states where leadership on teaching quality is manifested primarily by rhetoric would do well to look to the states where real engagement and significant reform have occurred.

Strategies and Policy Levers: What States and SHEEO Agencies Can Do

Look at the Data

States and SHEEO agencies can begin by evaluating what state policymakers know about the status of teaching. Relevant data include supply and demand information in the aggregate and by subject areas and grade levels, teacher turnover, the extent of out-of-field teaching, and the incidence of waivers, "emergency" or "temporary" certificates, and other ways of bypassing state rules to meet shortages. Pass rates, classroom performance, and program evaluations are important indicators of quality. The federal Title II report cards (www.title2.org) are a good resource.

Some states are already serious about teaching quality and accountability issues. North Carolina's public university system produces an annual report card with an extensive set of measures that deal with production and quality of teachers. Louisiana has constructed an accountability system that relies partly on federal data but also brings important state data to bear. Institutional performance has funding and other consequences in that state. Maryland's Student Outcome and Achievement Report (SOAR) system and other information from a variety of agencies give P-16 leaders a comprehensive understanding of teacher quality and student learning issues in their state.

In many states, K-16 or P-16 partnerships and SHEEO agencies have proved to be good places for discussions about data, which lead to agreement on strategies and next steps for reforming teacher preparation. Louisiana's P-16 Blue Ribbon Commission is a good example, as is the Maryland K-16 Partnership. Georgia, Ohio, and other states also provide examples and lessons.

Engage arts and sciences faculty

Faculty reward systems in the arts and sciences as well as in education can often be a barrier to effective teacher preparation programs. While these reward systems typically are campus responsibilities, SHEEO agencies can identify models that promote change and help their campus colleagues work through the implications.

While SHEEO coordinating boards have fewer direct ways to stimulate campus-based action than their governing board counterparts, they do have some ways to raise the issue of engaging arts and science faculty in teacher preparation. They can, for example, review and approve degree programs and offer "technical assistance" in the form of conferences, P-16 meetings, and direct advice to campuses. Arkansas, for example, convened the heads of all mathematics and science departments at institutions of higher education to brief them on state K-12 student learning standards and the implications for teacher preparation programs, professional development courses, and continuing education activities within the institutions. Other states – including North Carolina, Georgia, and Louisiana – have redesigned teacher preparation programs to help new teachers gain a greater mastery of content knowledge and require extensive arts and sciences involvement.

> In many states, K-16 or P-16 partnerships and SHEEO agencies have proved to be good places for discussions about data that lead to agreement on strategies and next steps for reforming teacher preparation.

Funding Policies

Without getting into the debate over whether teacher preparation programs are operated to generate more money than they cost to run, SHEEO agencies can look at how the state funding formula recognizes teacher preparation as an "academically taught clinical practice profession" (Carnegie Corporation of New York, 2001). Given the consensus that students preparing for teaching careers need much more clinical experience than most programs provide, most states have policies that require some form of induction program (analogous to residency in the medical world) for novice teachers in their first year or two of teaching. The goal of these programs is to enhance teaching skills, help teachers master the intricacies of classroom management, and enable teachers to make the leap from academic content knowledge to using that knowledge for teaching.

The problem is that few institutions adequately support the costs of these pre-service and post-graduate clinical experiences, and few states provide the resources to schools or to universities to do the job well. If states and institutions expect faculty to be in the schools working with students and new graduates (as indeed they should), important

workload and compensation issues must be addressed for faculty in the arts and sciences as well as those in the colleges of education. A key first step is to make sure that clinical experiences are a core component of the training program instead of a weakly-funded afterthought. Making them a core component in turn requires building the cost of clinical experience into state and campus funding formulas; a comparison of teacher education programs with nursing education programs would be relevant. SHEEO agencies can make a difference by working with campuses to identify their resource allocation patterns for clinical training; one good example is the Delaware Cost Study, run by Michael Middaugh at the University of Delaware (Middaugh, 2001; also see www.udel.edu). A number of SHEEO agencies participate in the Delaware project by providing credit hour and faculty compensation data.

A key first step is to make sure that clinical experiences are a core component of the training program instead of a weakly-funded afterthought.

Use of Resources

One of the striking things about state teacher education reform efforts is the extent to which states are using soft-money resources to leverage change. Louisiana, Rhode Island, Maryland, and North Carolina have aggressively sought federal funds to reform teacher preparation. Sources of support have included the National Science Foundation, the Title II Teacher Quality Program, GEAR UP, and Preparing Tomorrow's Teachers to Use Technology (PT3). In these and other states, external funds have been used to start or strengthen systemic change efforts, and the states have successfully avoided the "projectitis" that often plagues grant programs. Important state goals have been advanced using these funds; broad P-16 partnerships have become the means of bringing key players to the table to make significant progress on challenging issues. The critical question, of course, is how to allocate or reallocate public funds to sustain progress.

Among the excellent examples for SHEEO agencies to consider are Georgia, North Carolina, Ohio, Louisiana, and Pennsylvania, which have started programs with external funds and taken the tough step of moving state resources to keep the programs going. SHEEO agencies also have integrated professional development grants funded by *No Child Left Behind* into their teacher quality improvement efforts.

Policy Alignment

Because teacher quality is a P-16 issue, progress depends on the willingness of higher education policymakers to align key policies and practices with standards for students and teachers. All states now have learning standards for K-12 students; assessments

based on these standards can be high-stakes tests that students must pass to be promoted or to graduate. For these measures to work and to be fair to all students, teachers must be trained and supported in ways that ensure they have the knowledge and skills to help their students reach the standards set for them. It follows that higher education leaders must re-examine their standards for teacher preparation programs, look at the content of those programs course by course, and hold programs accountable for quality outcomes.

In general, two sets of state policies are relevant to high quality teaching and teacher preparation. The first is the set of programs or "pathways" that prepare prospective new teachers. Second is the set of standards and expectations that individuals must meet to become licensed teachers. The processes by which these state policy tasks are accomplished can make or break the academic success of K-12 pupils.

The best available measure of teacher or candidate knowledge and skills, aside from teacher tests, is information on candidates' test scores (ACT, SAT), grades in courses, and courses taken. From these indicators it is possible to construct overall grade point averages (GPA), GPA in major or minor fields, and GPA in specific subject areas. The problem is that test scores and grades are only proxies for student learning. Research from the American Educational Research Association (AERA) on teacher education reports little or no evidence that pre-teaching grades or test scores relate to teacher performance or pupil learning (Cochran-Smith and Zeichner, eds., 2005).

It follows that higher education leaders must reexamine their standards for teacher preparation programs, look at the content of those programs course by course, and hold programs accountable for quality outcomes.

As a result, important judgments about prospective teachers are made on the basis of measures that have nothing to do with the teaching success we want all teachers to have. Moreover, a compelling case can be made that the bewildering array of state licensing categories, teacher tests, and state-sanctioned exceptions to the rules are not designed to support high quality teaching so much as ensure staffing for every classroom. Unlike many other recognized professions, such as nursing, where state licensing requirements are standardized, every state has its own laws and rules for teacher certification and its own way of circumventing them to admit people to practice that are otherwise not qualified. The National Research Council has documented over 600 different teacher tests, with varying content, cut scores for passing, and psychometric properties (Mitchell et al., eds., 2001).

If the regulatory gate to the classroom is not wide open, it stands ajar in most states. Kevin Carey's report for Education Sector has documented in great detail how many states have found clever ways to circumvent the "highly qualified teacher" provision of

No Child Left Behind (Carey, 2006), suggesting once more that while good policy can be a tool for teacher quality and student achievement, it is also possible to use policy levers to avoid the issue of quality.

Emerging Issues

There has never been a better time to focus on the essentials in teacher preparation. The needs are great, the challenges many. But as the states implementing successful P-16 agendas understand, the rewards to higher education, of having an education system that works at all levels, are worth the effort. Positive reasons for acting are many, but there are also serious threats on the horizon that make the case for action even more compelling.

Even though most new teachers in the United States continue to be prepared at programs housed in colleges and universities, the fastest-growing aspect of teacher preparation is the alternative pathway to teaching. Four-year institutions offer some of these pathways, but they also are housed in community colleges, school districts, non-profit organizations such as Teach for America, and profit-making entities. Growth has been stimulated by the need for teachers and frustration at the pace of change in traditional (and tradition-bound) higher education. The Bush Administration has taken a decisive stand in favor of "alternative certification" that downplays the quality and role of traditional providers. The administration's position is embodied in the Elementary and Secondary Education Act (ESEA), in its approach to reauthorization of the Higher Education Act (HEA), in education rules and regulations, and in directing federal education funds to organizations that are committed to alternative certification and highly critical of traditional approaches to teacher preparation.

As the states implementing successful P-16 agendas understand, the rewards to higher education, of having an education system that works at all levels, are worth the effort.

Accreditation of education and training programs is one way by which a profession sets and applies its own standards and rules. To be effective and respected inside and outside the field, program accreditation must also be rooted in rational and scientific ideas that are the basis of education, licensure, and other forms of professional oversight (Starr, 1982; Begun and Lippincott, 1993). It appears from the literature of the professions that accreditation standards, therefore, must be more than aspirational. They also must be seen by those outside the field as effective mechanisms of quality control.

For teacher preparation, these preconditions do not exist. In contrast to the situation in other professions, the claims to professional authority of teacher preparation accreditation and licensure do not rest on agreement within the field “on what its rules and standards ought to be” (Starr, 1982, 80). Nor do they have the required links with sci-

entific knowledge or with results that benefit the public (Begun and Lippincott, 1993). There now are two accrediting bodies, NCATE and TEAC, but only about half of the university-based programs are accredited by either of these entities. Hundreds of teacher preparation programs neither have nor seek approval through accreditation. Many states do not require that new teachers complete accredited programs, breaking the link (if it ever existed) between training and licensing that other professions have established. No serious argument can be sustained that these programs all meet standards of high quality.

The critics are winning the argument, and will likely win the "war," between competing approaches to preparing teachers if those charged with setting and implementing policies for public colleges and universities do not step up to their responsibilities. Real action – policy changes, resource expenditures, and meaningful accountability – must match the rhetoric of change and commitment. There are plenty of examples of how to proceed. Institutions of higher education, such as those in Carnegie's Teachers for a New Era program, state higher education systems, agencies like those discussed in this strategy brief, and others noted in the resource list at the end of this document, are all taking steps in the right direction. No Dream Denied, the report by the National Commission on Teaching and America's Future (NCTAF), offers a coherent analysis of the link between high quality teaching and strong teacher preparation programs. This report provides specific recommendations for universities and states on ways to improve teacher quality and reduce teacher turnover. As noted earlier, there is no secret formula for success. The missing ingredient all too often is the will to take the actions necessary to produce excellent teachers for our nation's schools.

Conclusion: High Stakes for Higher Education

This strategy brief has suggested a wide range of important steps that state higher education systems can take to promote high quality teaching for every child. The biggest step – and the beginning of real progress – is to accept and acknowledge responsibility for teaching quality.

SHEEO received generous support from Carnegie Corporation of New York to work on teacher quality with thirteen state higher education systems. Each system chosen for this project agreed to target an important area of policy for which it has both clear responsibility and the ability to make a real difference. The activities pursued were required to result in outcomes the state and SHEEO can measure to gauge progress. The states involved in this project were Arkansas, Georgia, Indiana, Iowa, Massachusetts, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, Virginia, Wisconsin, and Wyoming.

Other states can benefit from the experience of this group and that of other states mentioned in this strategy brief. SHEEO can also help with advice or information about the Carnegie project and related national initiatives such as the National Commission on Teaching and America's Future (NCTAF), the work of the Education Commission of the States (ECS), projects under way through the Southeast Center for Teaching Quality, and other efforts to promote high quality teaching.

The stakes in this work are high for children. They are also quite serious for higher education. As noted above, there is widespread skepticism that American higher education cares enough about the success of K-12 schools to make fundamental reforms in the ways that teacher preparation programs are designed, delivered, funded, and held accountable. National foundations, states, and the federal government are turning away from higher education and investing resources elsewhere out of frustration at the pace and sustainability of campus-based reform.

The sun may be setting on traditional teacher preparation programs as school districts, states, and the U.S. Department of Education look to – and provide funding and policy support for – alternative pathways to teaching. The challenges to higher education, then, are clear. These systems and institutions must take K-12 student achievement seriously enough to produce better state policies and practices related to teaching quality. Higher education must see the threat to current practices as a serious spur to action.

References

Cochran-Smith, M. and K.M. Zeichner, eds. 2005. *Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education*. Washington, DC: Routledge.

Begun, J. and R. Lippincott. 1993. *Strategic Adaptation in the Health Professions*. San Francisco: Jossey-Bass.

Carey, K. 2006. *HOT AIR: How States Inflate Their Educational Progress Under NCLB*. Washington, DC: Education Sector.

Carnegie Corporation of New York. 2001. *Teachers for a New Era: A National Initiative to Improve the Quality of Teaching*. New York: Carnegie Corporation of New York. Also available at www.carnegie.org.

Education Trust. 2001. *Interpret with Caution: The First State Title II Reports on the Quality of Teacher Preparation*. Washington, DC: The Education Trust.

Imig, D.G. and S.R. Imig. 2007. "Quality in Teacher Education: Seeking a Common Definition." *Handbook of Teacher Education*. Netherlands: Springer.

Kain, J.F. and D.M. O'Brien. 1998. *A Longitudinal Assessment of Reading Achievement: Evidence for the Harvard/UTD Texas Schools Project*. Dallas, Texas: UTD Texas Schools Project, University of Texas at Dallas.

Mendro, R.L., H.R. Jordan, E. Gomez, M.C. Anderson, and K.L. Bembry. 1998. *An Application of Multiple Linear Regression in Determining Longitudinal Teacher Effectiveness*. Paper presented at the 1998 Annual Meeting of the American Educational Research Association.

Middaugh, Michael. 2001. *Understanding Faculty Productivity: Standards and Benchmarks for Colleges and Universities*. San Francisco: Jossey-Bass.

National Commission on Teaching and America's Future. 2003. *No Dream Denied: A Pledge to America's Children*. Washington, DC: National Commission on Teaching and America's Future.

Mitchell, K.J., Robinson, D.Z., Plake, B.S., and K.T. Knowles, eds. 2001. *Testing Teacher Candidates: The Role of Licensure Tests in Improving Teacher Quality*. Washington, DC: National Research Council.

Paige, Rod. 2002. *Meeting the Highly Qualified Teachers Challenge: The Secretary's Annual Report on Teacher Quality*. Washington, DC: U.S. Department of Education.

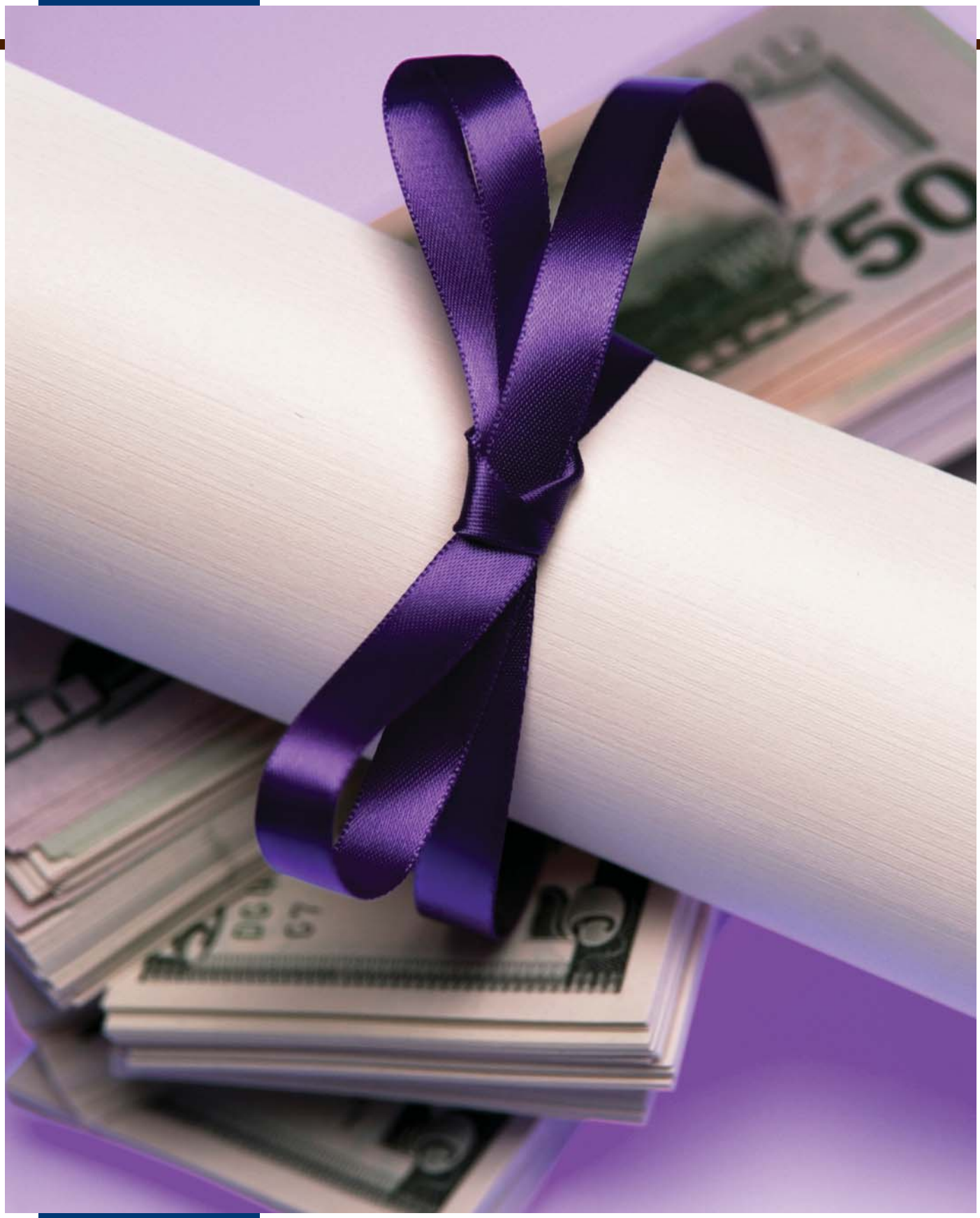
Rivkin, S.G., E.A. Hanushek, and J.F. Kain. 2002. *Teachers, Schools and Academic Achievement*. Cambridge, Massachusetts: National Bureau of Economic Research.

Rowan, B., R. Correnti, and R.J. Miller. In Press. "What Large-Scale Survey Research Tells Us About Teacher Effects on Student Achievement: Insights from the Prospects Study of Elementary Schools." *Teachers College Record*.

Sanders, W.L. and S.P. Horn. 1995. "The Tennessee Value-Added Assessment System (TVAAS): Mixed Model Methodology in Educational Assessment." In A.J. Shinkfield and D. Stubblebeam, eds., *Teacher Evaluation: Guide to Effective Practice*. Boston, Massachusetts: Kluwer Academic Publishers.

Sanders, W.L. and J.C. Rivers. 1996. *Cumulative and Residual Effects of Teachers on Future Academic Achievement*. Knoxville, Tennessee: University of Tennessee Value Added Research and Assessment Center.

Starr, P. 1982. The Social Transformation of American Medicine. New York: Paul Starr.
Wright, S.P., S.P. Horn, and W.L. Sanders. 1997. "Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation." *Journal of Personnel Evaluation in Education*, 11: 57-67.



Student Financial Assistance

By David A. Longanecker and Cheryl D. Blanco

Publicly funded student financial assistance is a relatively modern phenomenon. In the latter half of the twentieth century, financial aid evolved as a means of assuring that a much broader array of qualified Americans could receive the benefits of higher education. Publicly funded financial aid moved away from the focus of traditional scholarship programs toward the goal of eliminating financial barriers to college attendance for all qualified students, not just the best and brightest. Our policies have not traditionally recognized the critical link between financial aid, tuition and fees, and institutional support, all of which are critical to ensuring access for at-risk students and all of which must be in sync to maximize student success.

Why is Student Financial Assistance Essential to Student Success in a P-16 System?

Initially, financial aid policy focused almost exclusively on higher education. Apart from a handful of targeted efforts, such as the federal TRIO programs and a few state programs, such as Minnesota's Post-Secondary Planning Program (PSPP), the evolution of publicly funded student financial assistance was not perceived or integrated as part of a P-16 strategy for higher education. We have learned over the last half-century, however, that simply removing financial barriers to college attendance hasn't achieved the goal of eliminating inequalities in higher education participation and success. Several factors help account for this shortcoming: one is that the public policy goal has itself actually changed; another is that the original assumptions and intervention strategies were flawed; third, financial aid was not provided sufficient funding to achieve success; and finally, financial aid policy was considered in isolation from other finance policies, rather than being aligned with tuition and fee policies and with institutional support policies, all of which affect whether students have access and are likely to succeed in college. These four factors now make it clear that we must consider financial aid as an integral component in an overall P-16 strategy, not simply as a higher education funding tool.

What changes, then, have occurred to our public policy goals that require financial aid policy to move beyond the domain of higher education policy into the framework of P-16 initiatives?

The big change in policy goals is that we now see higher education as not just beneficial but essential to the pursuit of economic well-being for most Americans. In the past, financial aid policy was used to ensure that all those who sought a postsecondary education could do so regardless of economic circumstance, but we did not conceive that all young people would or should go to college. Today, however, policymakers concur that most young people and many more adults need to secure a college education to enjoy the individual benefits of "the good life" and to keep America economically vital and socially just. To achieve this evolving goal, public policy must progress from simply enabling participation to enhancing participation.

Yet this evolution of public policy does not in itself make a compelling case that financial aid, as a main strategy for financing college, must also be part of an integrated P-16 strategy. This factor becomes compelling only when blended with the second factor mentioned above – the fact that our original strategy was flawed. The prevailing thought was that making the funds available would provide the educational opportunity for which we were striving. But money itself was not enough. Too often the students and their families did not know that financial aid was available or that it was sufficient to offset their need. Both federal and state financial aid programs failed to provide adequate information to prospective students and their families to assure them that college was affordable. Furthermore, neither federal nor state activities provided strong signals to these students and their families about how to prepare for college. Many of the new students attracted to college have therefore not succeeded because they were not prepared academically to do so. As a result, we have seen recent reforms in student aid policy begin to focus both on providing information earlier and on encouraging better academic preparation.

We now see higher education as not just beneficial but essential to the pursuit of economic well-being for most Americans.

These two new components directly tie financial aid into K-12 initiatives. A consideration of how college will be financed becomes a necessary and integral component in the early intervention activities, and past experience teaches that building such awareness entails two steps: providing clear information that college is affordable through financial aid; and, increasingly, underscoring the message that a student will have to earn this affordability through rigorous preparation.

The need to instill better understanding of what college study entails alone would justify the P-16 link. It is further justified, however, by another trend – the increasing cost of American higher education. Tuition is increasing in both public and private institutions of higher education at rates that substantially exceed inflation. This trend is not a new

phenomenon, born of recent fiscal distress in the states, but rather has evolved over many years, and there is no reason to believe these rates of increase will not continue. Exacerbating this legitimate concern about college costs are the less accurate portrayals of college costs in the public media. Investment firms advertise "runaway costs of college" to encourage parents of prospective students to invest more. Politicians rail against outrageous college costs to garner political opportunity. And even public agencies that sell college savings plans try to worry folks into investing in their particular products. Whatever their intent, these efforts greatly confuse the public about what college costs. In a poll conducted in 2000 by the American Council on Education, most respondents estimated community college tuition and fees to be 300 percent higher than they actually are, and respondents overestimated public 4-year institutions' tuition and fees by more than 200 percent (American Council on Education, 2001).

For students from low-income families, however, misperceiving costs can dissuade many of these prospective students from attending college at all.

Overestimating the cost of higher education perversely affects participation in higher education. For prospective students from middle-income families, research shows that misperceiving the cost will not likely affect the decision to attend college, but it might well affect where they attend. For students from low-income families, however, misperceiving costs can be devastating; overestimating costs will dissuade many of these prospective students from attending college at all. Recent research conducted by Thomas Kane indicates that a $1,000 difference in the price of college may impact college enrollment for the most financially needy students by as much as nine percent (Kane et al., 2003). Thus, our public policy goal of enhancing participation cannot be achieved if we do not better inform students about the interplay between tuition prices and financial aid.

The need to explain college costs presumes that there is a positive relationship between tuition and financial aid policy at the state level, and that we can honestly inform students that college is affordable. Unfortunately, in too many states no such relationship exists, and honesty would mean telling a story we wish not to relay – that a state does not guarantee affordability. Yet for at least two reasons, even presenting this story would be an important part of a P-16 strategy. First, telling this story would honestly portray for students the circumstances they face, providing early warning that they need to look elsewhere for the financial support they will need. Second, highlighting the true lack of affordability in a given state environment could force the profound changes in higher education finance policy that many states need. This was certainly the impetus for the recent reform of Oregon’s financial aid system, which evolved only when it became publicly apparent (and embarrassing) that the state was doing a poor job of protecting its most financially at-risk students.

For a variety of reasons, therefore, we now know that student financial assistance must be an essential component of any P-16 strategy if we wish to enhance student success in postsecondary education.

What Does a Sound Student Financial Assistance Program Look Like in a P-16 System?

Drawing on our operational definition of P-16 as "an integrated approach to providing education from kindergarten to a baccalaureate degree," this policy brief suggests that a well-grounded state financial assistance program would have several characteristics. While our list may not be exhaustive, we nonetheless believe that any financial aid program in a P-16 environment that seeks to increase the chances for youth to participate and succeed in postsecondary education should have the following characteristics.

A state may also want to have a separate program that recognizes both merit and need, offering higher aid packages for those students who meet the need criteria while also demonstrating academic excellence.

Student oriented

A statewide financial assistance program should meet the needs of the students it serves, and this target group will be shaped by demographic, social, and economic factors that need to be considered if the state is trying to expand access, choice, and success in postsecondary education for all students. Because every state has unique demographic characteristics, there is no perfect "one size fits all" financial aid program, but there are broad programmatic structures that are used successfully by many states. Examples of these broader categories are need-based aid, merit-based aid, and occupation-specific aid (e.g., aid for students to study nursing, teaching, engineering, etc.). A state that seeks to increase the participation rate of its low-income students will want to ensure that it has needs-based test criteria in its program. It is also important that a state fund such programs in sufficient degree, while at the same time communicating to lower-income students that these programs are intended to meet their financial needs. A state may also want to have a separate program that recognizes both merit and need, offering higher aid packages for those students who meet the need criteria while also demonstrating academic excellence.

Considerable research has been dedicated to understanding how the availability or unavailability of financial aid influences college-going decisions by students and their families. We don't have all the answers, but we have learned much that can help us

Some promising state practices:

Indiana's Twenty-first Century Scholars Program exemplifies an initiative that not only connects with young people before they reach high school but also commits resources to them. The Indiana program reaches out to low-income eighth-graders with financial aid assurances. In middle school, students commit to taking the steps to prepare for college; the state promises them financial aid for in-state tuition at a public university or its equivalent at a private college. A recent study of the program reported that participation in the Scholars Program improved postsecondary opportunity for low-income students. Scholars were more likely than non-Scholars to enroll in Indiana public and private colleges (St. John et al., 2002). In addition to aid, the Scholars Program provides services to students and parents through workshops, mentoring, academic support, social/cultural events, career counseling, and other activities at regional support centers.

Rhode Island's Children's Crusade for Higher Education is another statewide, early-intervention program that provides support programs and financial aid. Students must enroll as third-graders in a school designated as an "enrollment school." "Crusaders" who fulfill their pledge to avoid alcohol, drugs, and early parenthood, who graduate from high school, are admitted to a postsecondary institution within a year of graduation, and are financially eligible will receive a cash scholarship distributed on a "last dollar basis" to offset unmet need, reduce loans, or decrease the amount of need-based work-study.

Minnesota communicates its affordability message through its time-tested “Design for Shared Responsibility.” This program clearly articulates the share of college costs that should be borne by students, their parents, the federal government, and the state. This gives prospective students and their families the capacity to realistically plan for financing a college education within their own financial means. No one gets off the hook, and the expected contribution from students and their families is substantial, but in all cases it is manageable and also prudent with respect to public responsibilities.

Oklahoma’s Promise—OHLAP, targets eighth-, ninth- and tenth-grade students whose family's income is $50,000 or less at the time of enrollment. Student requirements include taking and passing 17 units of required high school courses – Oklahoma's Promise—OHLAP curriculum – and achieving a cumulative 2.5 GPA or better in the curriculum, as well as a cumulative 2.5 GPA overall in high school. Students must also stay away from drugs and alcohol, and not commit criminal or delinquent acts. Additionally, students are required to meet with a teacher, counselor or principal to review schoolwork and records, provide information when requested, apply for other financial aid during the senior year, and participate in Oklahoma's Promise—OHLAP activities to prepare them for college. Oklahoma's Promise—OHLAP pays tuition at an Oklahoma public 2-year college or 4-year university, and at least a portion of tuition at an Oklahoma accredited private college or university or courses offered at public technology centers that qualify for credit from a public 2-year college.

increase participation and success of underrepresented populations through financial aid programs. We know, for example, that:

- The least wealthy know far less about the cost of tuition than any other income group, and estimates of tuition still far exceed the actual cost (American Council on Education, 2002).
- Low-income students are more likely than more affluent students to have earned an alternative credential and delayed their entry into postsecondary education (King, 2002).
- Compared with the average price of attending different types of institutions, the average expected family contributions (EFCs) for low-income students are relatively small, so virtually all low-income undergraduates attending full time, full year have financial need (U.S. Department of Education, 2000).
- Financial aid makes college possible for most low-income students who are otherwise prepared (Choy, 2002).
- Low-income students who began their postsecondary education are less likely than their higher-income counterparts to have earned a degree or certificate or still be enrolled four years later (U.S. Department of Education, 2000).

Promoting choice:

Colorado has adopted a voucher program that, in lieu of traditional subsidies to institutions based on FTE enrollments, provides direct grants to all students attending in-state public institutions of higher education and Pell-eligible students at selected private institutions. Viewed as a more "market-driven" way of financing higher education, it is envisioned that, through this student-centered financing approach, every prospective student will know how much he or she will receive in direct subsidy early in the decision-making process. Though this bold new approach is certainly innovative, it unfortunately fails to adequately take need-based financial aid into account, leaving the most financially vulnerable students at risk because there is no assurance that they will be able to afford the substantially higher tuition, fees, and other costs of attendance not covered by the voucher. Perhaps even worse, it actually promises financial aid for which financing has not been provided.

Financial barriers are generally much more prevalent for low-income, underrepresented, and first-generation students than for others, and the amount of tuition and availability of financial aid are more important factors for these groups than for students in other income levels in deciding not only where to go to college but if they can go to college. "In general, African American, Hispanic, and low-income students tend to be more price responsive (i.e., are less likely to enroll in college, or change the type of institution in

which they enroll, in the face of tuition increases) than are white and middle- and upper-income students" (Heller, 2001). Thus, it is essential that the families of these students know by middle school or early high school what financial aid is available, in what forms, how much, and how to access it. Counseling services, outreach programs, and community-based support groups all can play a role in helping with information services and planning.

> It is essential that the families of underrepresented students know by middle school or early high school what financial aid is available, in what forms, how much, and how to access it.

Without both comprehensive information and an assurance that adequate aid will be there when they graduate, students may be less likely to prepare academically, to look at their postsecondary options seriously, and to begin their financial planning. It is not uncommon for high school seniors to learn about their financial aid awards only weeks – or a few days – before classes begin. This timing presents an insurmountable obstacle for low-income students who do not have adequate resources at hand to cover remaining costs. In addition to providing information and counseling services to support students and families in understanding financial aid options and obligations, programs should be designed and funded to commit resources to students well before they leave high school. The goal of enhancing participation in higher education will not be achieved if students perceive that college is unaffordable and the financial barriers are not significantly reduced or eliminated.

State policymakers and institutions must also be well informed about the advantages and disadvantages of different types of aid programs and their impact on student access, choice, and persistence in postsecondary education. The need for such understanding derives from the fact that policymakers and institutions are responsible for shaping financial aid programs and funding them in such a way that students and families can count on them.

Another critical characteristic of student-oriented financial aid programs in a P-16 system is their ability to promote choice, both when students begin postsecondary education and as they transition into different kinds of institutions. Conduciveness to choice is particularly important for expanding access to higher education, and it must be clear to students and their families which programs are available and most useful to them. Financial aid awards that are too low or linked to a particular kind of institution will inhibit student choice by limiting their options to low-tuition institutions or specific institutions. In a P-16 environment, all students should know that they have a reasonable expectation of choosing among a broad array of institutional types in American higher education. Students who transfer from one institution to another should be able to do so smoothly, knowing that their aid moves with them with no restrictions imposed in the transition.

Indeed, this issue of transparency in aid highlights a persistent problem with some state policies which rely primarily on institutions to provide financial aid rather than developing state financial aid programs. Even if well-intentioned, institutional aid programs fail the basic tenets of transparency because students don't know what they are going to receive until they apply to college, and thus they have little information to rely on in preparing for college. But more importantly, institutions tend often to be less concerned about serving the most financially at-risk students, both because their financial liability can be substantial and because the lowest-income students, on average, bring fewer academic assets, which can degrade the academic reputation of the institution. Institutional aid, therefore, is often an inadequate substitute for state aid in serving the public good. Another area of increasing concern in this regard is aid for part-time students. A P-16 environment recognizes that some students will be able to attend college only on a less-than-full-time basis, yet there are few states that provide aid for part-time students. Effective state financial aid programs support choice and provide the student with flexibility.

State financial aid policy, and the programs established to support policy, are rarely integrated with two other key state policy areas: tuition, and direct institutional support.

Integrated with state tuition and financing policies as well as with federal and private aid programs

A major reason we have financial aid programs at all is to offset the cost of going to college for low-income students and those who could otherwise not afford to attend. In determining how much and what kind of aid each student will receive, financial aid officers consider multiple factors, and one of the most critical is the cost incurred by the institution to provide the educational experience. In most institutions, the cost of education is shared by the student, the institution, and the state. The student's share is reflected in tuition and fee charges, and the financial aid packages that higher education institutions provide are directly related to the level of tuition and fee charged. Ironically, however, state financial aid policy and the programs established to support policy are rarely integrated with two other key state policy areas: tuition and direct institutional support. Unless state policies related to financial aid are consciously linked to financing policies (primarily tuition and appropriations), students who can least afford to go to college will be short-changed and may be denied equality of opportunity in access to postsecondary education.

David Longanecker has articulated the importance of aligning financing and financial aid policies and practices: "Integrated financing policy should ensure that state policy and practice with respect to institutional support are in sync with state tuition and financial

Aligning policies:

The Western Interstate Commission for Higher Education (WICHE) has explored these issues through a project titled, *Changing Direction: Integrating Higher Education Financial Aid and Financing Policies*, supported by Lumina Foundation for Education. The project has examined how to structure financial aid and financing policies and practices to maximize participation, access, and success for all students.

Year after year, the policymaking and education communities struggle with questions of how to meet growing needs through state allocations, how best to ensure shared and equitable responsibility for meeting the costs of higher education, and how best to use subsidies such as financial aid to expand access and opportunity. The project demonstrates that too often these issues are dealt with as discrete questions rather than reflecting the interrelatedness not just of higher education finance and financial aid policies, but also of state and federal arenas. Few states are satisfied with their decisions in these areas, and the search continues for better solutions to these ever-present problems. Through this project 14 states accepted the challenge to achieve better alignment among key policies pertaining to financing and financial aid.

For more information on the Changing Direction project, visit www.wiche.edu/Policy/Changing_Direction/index.asp.

aid policies and practices. . . . State financial aid policy must protect those students from low-income families who simply can't bear increased costs . . . [for] participation of students from low-income families does decline as the price of college increases. Good, well-integrated policies, however, can address this." He notes that price-sensitive students need to be protected from tuition increases through policies that offset any increase in price with increased financial aid. Securing such protection requires two policy imperatives: first, a viable state financial aid policy; and second, the integration of that policy with state tuition policy and federal financial aid in ways that intentionally secure financial access. "The absence of such intentionally integrated policies in most states means that in tough times, when tuition logically increases, financial aid either declines or remains stagnant" (Longanecker, 2002).

Just as important, public colleges and universities must have reasonable assurance that state appropriations will be sufficient to keep up with increases in the cost of providing high quality postsecondary education. The closing years of the twentieth century marked a good period generally for higher education as states often increased their appropriations to postsecondary institutions; many states also dedicated a larger share of their budgets to higher education. The early years of the 21st century revealed a very different trend, as state revenues declined precipitously because of the paucity of state resources available to sustain all public services, including higher education. The uncertainty of state dollars for higher education resulted in higher tuition rates at most institutions to

cover the increasing costs of providing postsecondary education. The effect of these developments was to place student access and persistence in further jeopardy. Now, as states' fiscal conditions improve, many states are restoring the funding to institutions and students that were cut in the most difficult years, but the erosion of access has already occurred. Fiscal instability in state appropriations degrades the basic ability of students to count on financial aid.

It often occurs that misalignment between programmatic intentions and actual implementation is not recognized until too late.

Accountable and appropriate for the goals they serve

Well-intentioned state financial aid programs often get off track and are expected to accomplish objectives they were never designed to address. One reason for an apparent loss in direction is that programs are often established in statute and funded without including a comprehensive evaluation component as part of the program design. Periodic assessment of financial aid programs is essential to ensure that such programs are effective and efficient in advancing the goals of greater participation and success in higher education. It often occurs that misalignment between programmatic intentions and actual implementation is not recognized until too late – after the awards have been distributed and spent. Ongoing research needs to be conducted on how well state financial aid programs achieve their goals.

The difficulty in assessing program effectiveness increases not only when program purposes are not clear but also when aid programs intend to accomplish multiple purposes. Merit aid programs that require high GPAs and a rigorous college-preparatory curriculum because they are intended to stem the brain drain in a state should be held accountable for doing just that – they should not be expected to increase the number of low-income, first-generation students. Merit programs generally will not be successful at achieving the goal of expanding access for low-income, underrepresented, first-generation students because these individuals often do not have access in their schools to the required rigorous curriculum. If the college-preparatory track is available in their school, these students too frequently have not taken the courses in middle school that prepare them for the college preparatory courses in high school. Conversely, financial aid programs that are need-based and structured to increase the participation and success of underrepresented groups in college should be held to that standard.

Most states have suffered from program proliferation and vague or ambiguous programmatic objectives. These conditions are usually symptoms of a lack of clarity among policymakers about the overall purpose of a state financial aid program or what program design will best achieve that purpose. If "brain drain" is a problem that the state wants

to address through its financial aid programs, then that goal should be very apparent. If the problem is low achievement, especially at the high school level, then an aid program that rewards high school students for taking a college-preparatory curriculum should be the obvious goal. Whatever the issue, expected program outcomes must be clear and measurable so that every program can be held accountable for demonstrated improvement. With fewer fiscal resources available for financial aid programs, the temptation is strong to reduce the overall number of programs by merging two or three unique programs into one generic program. While consolidation may be recommended for better program administration, the cure may be worse than the problem if dissimilar programs are merged. Blended aid programs that link need with high academic performance are becoming more common with the allure of a high academic standard, but it is very difficult to assess the effectiveness of such programs. An effort to build one large program from several smaller programs by simply combining their highly diverse goals may set the entire program up for poor results.

Financial aid programs in a P-16 system are grounded in good data, and good policymaking to establish and support those programs requires good information. "Poor information at the state level can result in decisions that negatively affect large numbers

Effective Data Systems:

Florida has built a K-20 education data warehouse from existing systems, including data systems that encompass P-12, community colleges, universities, and financial aid. Student data includes demographics, enrollment courses, test scores, financial aid and awards; employment information covers educational curriculum, staff, demographics, certified staff, and educational institutions. The Florida Department of Education oversees the data warehouse, which enhances information sharing and allows analysis from multiple sectors. The mission of the Florida K-20 Education Data Warehouse (EDW, http://edwapp.doe.state.fl.us/doe) 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. EDW integrates existing, transformed data extracted from multiple sources that are available at the state level.” The state characterizes the EDW as an integrated public education data system that allows longitudinal analyses, is student-centric, contains historical and current data, has confidentiality ensures (personally identifiable information removed), and provides state-of-the-art analytical capabilities.

North Carolina has a "data-based decision-making" approach found in few other states. Information feedback mechanisms, implemented by the University of North Carolina, provide community colleges and high schools with solid information about the consequences for their students of their prior educational experiences on their success in the UNC system.

Examples of Effective Elements in State Programs:

Oklahoma's Higher Learning Access Program (OHLAP) targets eighth-, ninth-, and tenth-grade students with family incomes of $50,000 or less. In the course of its first decade, enrollment has increased significantly as OHLAP's visibility has increased and families have come to depend on the program and its funding.

Minnesota's shared responsibility model has been in place for over 20 years and appears to be widely accepted and understood by students, parents, and school and college administrators. Since its inception, the "Assigned Student Responsibility" portion has been very stable – first set at 50 percent in 1983, it did not change until the legislature lowered it to 47 percent for fiscal year 1999; it was lowered one percentage point more in fiscal year 2001. This kind of policy provides a level of consistency and predictability that makes it far easier for families and students to determine how much they must pay.

California policymakers dramatically increased the state's Cal Grants program appropriation in 2001 in order to guarantee an award to all high school graduates with at least a C grade point average and financial need.

The **Oregon** University System and the Oregon Community Colleges established an "Access and Affordability Working Group", which brought forth a proposal to radically restructure the state's need-based grant program. Fashioned loosely along the lines of Minnesota's Design for Shared Responsibility, the Oregon "Earned Opportunity" plan will take full advantage of the federal benefits available to students, including Pell grants and tax-credits, but will not be held hostage by federal policy, practice, and funding levels.

Georgia's Helping Outstanding Pupils Educationally (HOPE) Scholarship and Grant Program has been highly successful in communicating with the state's citizens. Most everyone in the state – students, teachers, parents, families, counselors, and school administrators – knows what HOPE is and how it works. Students know they can count on it being available to them, as well as how to receive and keep the award.

of students, institutions, and citizens in multiple ways. Relevant information enables substantive discourse, dialogue, and debate about key policy issues in higher education" (Jones et al., 2002). Financial aid decisions about funding levels, qualification criteria, target groups, and award levels are made on composite information drawn from several sources in education. Because our goal is not just enrollment in college but also academic preparation, persistence, and success, the information pipeline extends from at least middle school through the baccalaureate degree, with significant milestones along the way. Accurate, timely, and accessible information on individuals as well as groups of students is critical in developing and projecting aid program participation criteria and funding levels.

When data systems in K-12 and higher education are separate and independent, their capacity to "talk" to each other is critical for identifying potential recipients, determining persistence, and assessing need. Student unit record systems are essential in a P-16 environment, and information on financial aid eligibility is a necessary element in that environment if students are to have access to information on what is available to them and if consistent, timely, high quality information is to be available for policymakers to make informed funding and program design decisions. A number of states have developed “consumer information” systems to help inform prospective students, and the Federal Government has developed an “aid estimator” for students to use in projecting their likely federal student assistance. Private corporation programs, such as XAP’s Mentor Program, also provide robust information for students to use in planning for college.

Transparent and predictable

A universal complaint about financial aid is the complexity of the application process. Simply stated, applying for financial aid can be very complicated, and we have no idea how many students and families simply give up when faced with filling out the forms and collecting the documentation. Experience and research tell us that programs need to be highly visible so people know about them, consistently funded so people can count on them, and characterized by an application process that is relatively clear, easy to understand, and simple to complete. Fortunately, there appears to be increasing interest at the federal level and within the states in simplifying the financial aid application process. The National Commission on the Future of American Higher Education, which issued its final report in September 2006, included simplifying the financial aid system as one of its major recommendations. The Advisory Commission on Student Financial Aid, a federal group charged with examining ways to improve the federal financial aid programs, has accepted the challenge to find ways to simplify the delivery of financial aid. Unfortunately, however, the higher education community has yet to endorse these efforts, and absent the support of the communities that ultimately control the student aid package that students receive, it will be hard to achieve the desired simplification.

Comprehensive and inclusive

In a P-16 system, financial aid provides support in high school and throughout college, with resources focused when and where they are most needed. In the same way that many early intervention programs reward middle and high school students for behavior, grades, or courses taken, financial aid during the college years could reward persistence and degree completion for low-income students. Such rewards may take the form of differential aid to recognize persistence – increasing the award level at those points in a student’s matriculation (for example, the transition from the first year of study to the second) that enhance the likelihood that a student will stay in college and progress toward the degree. A similar effect would be achieved by replacing loans with grants during the final year or two of the degree program. Or the differentiated aid could be used to promote access and participation by making higher awards in the freshman and sophomore years and using grants in the first couple of years rather than loans.

A form of financial aid at an early stage in a P-16 system is funding for acceleated options – such as dual enrollment, Advanced Placement (AP), and International Baccalaureate (IB) programs – for all students. To enhance the participation of low-income students, as well as all students in accelerated programs, state policy in a P-16 environment will encourage school districts and higher education institutions to collaborate in offering these academically rich opportunities to all students – especially those in rural and economically disadvantaged districts. The other important part of the state's role is to provide financial support for these programs. Many states require the student to pay for part or all of the cost of the accelerated programs. When students are responsible for paying tuition and fees for dual enrollment, concurrent enrollment, AP, or IB courses, the barriers for participation by low-income students rise dramatically. A recent WICHE publication, *Moving the Needle on Access and Success*, describes in depth the ways in which accelerated learning programs currently enhance and impede progress, particularly for underserved students, and outlines how states currently do and could use policy to make these programs more effective.

When students are responsible for paying tuition and fees for K-12 accelerated programs, the barriers for participation by low-income students rise dramatically.

Reinforces readiness

In addition to inclusiveness and comprehensiveness, financial aid programs should reinforce readiness for college rather than attainment of grade averages. While the Department of Education's recent publication, *The Toolbox Revisited*, demonstrates that while high school grades do matter in whether students achieve at higher levels of education, neither grades nor grade point averages (GPA) matter as much as the rigor of their high school curriculum. Many programs – both need- and non-need-based – require a minimum GPA with no recognition of the content and rigor of the courses students take. What often happens is that students refuse to take challenging courses like those in accelerated options, preferring to take easier courses in order to maintain or improve their GPA and chances to qualify for a scholarship. All of our activity in preparing students to leave secondary school should focus on providing the strongest possible preparation for college or the work force. Financial aid programs that emphasize GPA over readiness send the wrong signals to students and ultimately diminish their ability to compete successfully, either in college or in many jobs. Student assistance programs should be structured to motivate and reward achievement and encourage strong academic preparation. Some states have done this by requiring completion of a "core curriculum" to qualify for certain aid programs, but these are usually scholarship programs.

The elements of a comprehensive P-16 financial aid program are similar to what one might expect from any good state financial aid program. Unfortunately, we have been

Advanced Placement Model:

The U. S. Department of Education's Advanced Placement Incentive Program is a national effort to increase the numbers of low-income students taking Advanced Placement courses and examinations. Through a competitive process, applicants seek funding to provide fee reimbursements to qualifying students for taking Advanced Placement examinations; additional funding is awarded to applicants for a wide range of activities (such as teacher and counselor professional development, online accelerated courses, pre-Advanced Placement activities, vertical team development, etc.) that will help increase the participation of low-income students in accelerated learning programs. States could build strong programs on this model.

unable to identify many states with a P-16 program with the characteristics indicated above. Indiana and Oklahoma come closest to achieving a comprehensive P-16 plan. Others exemplify some of the elements, but not all of them. The goal of successfully applying a holistic approach to education from kindergarten to the baccalaureate cannot be achieved with equity for low-income, underrepresented, and first-generation students until we can unequivocally say that our state financial assistance programs are oriented towards students, integrated with state financing policies and federal and private programs, accountable and appropriate for the goals they serve, information-driven, transparent and predictable, comprehensive, and structured in such a way as to reinforce readiness.

What Are the Obstacles to a Successful Student Financial Assistance Program in a P-16 System, and How Might They Be Overcome?

The obstacles to incorporating successful programs of student financial assistance as an integral component of a P-16 strategy for enhancing student success fall into two categories.

Dilemma I: The Issue of Capacity

Insufficient fiscal resources

Almost all states, and certainly the federal government within the Higher Education Act, have strong rhetoric that supports broad participation in postsecondary education for all citizens who are willing and able to benefit from such study. Without adequate financial support to achieve that goal, however, access cannot be assured. Without a financing scheme that eliminates legitimately assessed financial need, research shows clearly that many students from low-income families will not attend college, and many of those that

do will not succeed. It's that simple. States that fail to address this funding breach will fail to achieve true access to success in postsecondary education. Today, only about 12 states have robust enough state need-based financial aid programs to ensure financial access, and even fewer states intentionally seek to integrate their financial aid, tuition, institutional support policies, and funding practices to ensure true affordability.

Often, the insufficiency of fiscal resources results not so much from a lack of will as it does from antiquated policies that inappropriately address modern public policy objectives. For example, many states rely on low tuition as their primary strategy for ensuring affordability. When first adopted more than a century ago, that approach made sense; public subsidies to the institutions were sufficient to cover the costs of educating the few best and brightest young high school graduates, who were the only ones expected to attend college. With today's expectation that most young people will graduate from high school and continue on to college, the old low-tuition model does not suffice – first, because it does not account for the true costs of college attendance; and second, because it does not provide the institutions with the resources necessary to educate the masses.

One commonly proposed solution is for public policymakers simply to recognize that higher education provides great social and economic value to a state and thus warrants greater investment. That argument has been relatively unsuccessful in the past and promises to become even less compelling, given the current scarcity of public resources, and the fact that there is nothing particularly new or novel about the argument. In fact, the substantial economic returns that higher education confers on individual students may have weakened public support, if only because these returns heighten the perception that higher education offers more of a private than a public value.

Requirements for Student Assistance:

Florida's Bright Futures Scholarship Program consists of three lottery-funded scholarships: Florida Academic Scholars Award (FAS) (including Academic Top Scholars); Florida Medallion Scholars Award (FMS); and Florida Gold Seal Vocational Scholars Award (GSV). Initial eligibility requirements include residency, citizenship or eligible non-citizens, specific coursework, and minimum GPA and test scores.

Louisiana's Tuition Opportunities Program for Students (TOPS) requires 16.5 core units and a 2.50 GPA on core courses for the base Opportunity Award; other awards require higher GPAs.

Oklahoma's Higher Learning Access Program is one of the few need-based programs with an average GPA requirement – 2.5 – and specified units of high school courses to prepare students for college.

Two promising public policy strategies, however, are currently being considered in a number of states for addressing the fiscal resource barrier. The first would reallocate both public and private resources within higher education in a way to enhance affordability for all students, particularly those with greatest need. Generally this strategy calls for increasing tuition and offsetting the cost of this increase for needy students with substantial increases in targeted need-based financial aid. The additional tuition revenues can help ensure affordability for existing students with unmet need while expanding access to other students who currently cannot afford to attend, even in a constrained state fiscal environment.

A number of states are trying a second strategy, which moves beyond the old approach in favor of a new one. Though many of the recently adopted "merit-aid" programs have distinct design flaws, they have clearly caught the imagination of policymakers by bringing "need" and "achievement" together. Merit-aid programs create a partnership of sorts between the government and the beneficiaries. Indiana's Twenty-first Century Scholars Program and the Oklahoma Higher Learning Access Program (OHLAP) stand out as models in this realm. They blend need and merit by focusing resources only on low- and moderate-income families and rewarding students for taking a rigorous curriculum. These programs avoid two problems of some "merit" programs: they don't offer incentives to take easy courses to get a higher GPA, and by combining need and academic achievement they are more efficient than programs that make grants to students who have ample financial resources and require no assistance to enroll.

Often, the insufficiency of fiscal resources results not so much from a lack of will as it does from antiquated policies that inappropriately address modern public policy objectives.

Competing state goals

Governors and legislators must balance many demands for limited resources. Some federal mandated costs such as Medicaid leave states with no choice, although in most cases policymakers choose between competing and important public services. Over the years, higher education appears to have lost its luster, receiving a gradually decreasing share of state budgets, despite an increasing demand for its services. Yet higher education must take care not to overplay this phenomenon for, although the share of resources has been declining, the actual amount provided to higher education has increased.

Ensuring that higher education fares well in the competition among state priorities will be extremely difficult for three reasons. First, higher education is increasingly being perceived as a private good. Second, some other services must grow, either because of mandates or from being of such pressing present concern (e.g., homeland security) that

they receive higher priority. Third, because higher education has recourse to tuition as an additional source of revenue, it is one of only a few state services in which costs can be conveniently shifted.

However, the same strategies discussed above in the financial sufficiency discussion – reallocating within higher education and presenting a "new way" of enhancing access – may be successful in helping higher education compete more effectively in the public arena.

One commonly proposed solution is for public policymakers simply to recognize that higher education provides great social and economic value to a state and thus warrants greater investment.

Lack of student aspiration and motivation

Low aspirations and the lack of student motivation present major obstacles to success in a P-16 strategy. One might readily ask, if pre-collegiate students do not aspire to higher education and lack the motivation necessary to prepare adequately, does public policy even matter? In fact there is evidence that it does. Some studies suggest that the reason many young people are unmotivated and non-aspiring is that they do not believe it possible to continue their education. They often believe that they cannot meet the learning requirements, and that even if they could succeed, their families could not afford to send them on to college.

On first blush this may seem like a legitimate issue for the P-16 agenda, but not a legitimate focus for financial aid within the broader agenda. A number of early intervention efforts have evolved recently, however, to work with these students and their families, and equally important, with their teachers, counselors, and financial aid professionals, helping them understand that all students can learn, that they must do so if they want the good life, and that financial aid is available to help meet the cost of higher education if they prepare well. Most notable amongst these early intervention programs are the federal GEAR-UP programs, which are attempting to bring to scale many projects modeled after innovative efforts such as the Ford Foundation's Project Grad and the I Have A Dream Programs. These programs blend encouragement, rigorous preparation, and guaranteed financial aid into a package that helps motivate students to achieve at higher levels.

Financial assistance, then, can be an effective part of a program to increase aspirations and motivation, but only if designed well.

Dilemma II: The Paucity of Good Strategies

Complexity in design and operation

A serious obstacle to incorporating today's financial aid scheme into an effective P-16 strategy is the complexity of that scheme. In combination, federal, state, and institutional programs do a nice job of covering the landscape of needy students, but they are so complicated that no one from outside the financial assistance club can understand the rules. The reason these programs are so convoluted is simply that the focus is on the wrong place; they are designed to serve the needs of institutions and government first and foremost, not of students. Institutions want to retain discretion over which of their students will receive what aid. And, because aid flows in from a myriad of governmental and private sources, in addition to what the institutions provide themselves, the financial aid professional has become an essential broker for packaging financial aid. The dilemma, however, is that this arrangement makes the process anything but transparent to the prospective student. How can prospective students plan for the future if they have no idea how their aid will be packaged when the time comes?

A second dimension of the complexity issue has to do with the design, regulation, and rules for financial aid. Filling out the Federal Application for Student Financial Assistance (FAFSA) has been greatly simplified in recent years, but it remains a daunting task for families with limited means, sophistication, and literacy skills. A recent paper by Dynarski and Scott-Clayton demonstrated that completing the FAFSA is more difficult than preparing one's taxes (Dynarski et al., 2006). The process could be much simpler, particularly for very poor people. In addition, federal regulations on the institutional management of the programs, all developed for good reason and in a professional manner, tend not to capture the true nature of student life, particularly for students from low-income backgrounds. Some of these impediments cannot be removed because they are necessary to manage exceptionally large programs and to prevent fraud and abuse. Yet some of the complexity could be eliminated, particularly for students with substantial financial need. We need to simplify a number of aspects of these programs so our intended beneficiaries can better understand that they can go to college.

> Programs in Indiana and Oklahoma blend need and merit by focusing resources only on low- and moderate-income families and rewarding students for taking a rigorous curriculum.

Complexity will always be an obstacle to some extent, because of the many sources of benevolence that contribute to the overall financial aid scheme. But, the process can be simplified. Minnesota has a very substantial state student financial assistance program,

which makes it easy for a prospective student to understand her or his obligation and what others will provide, yet the state delivers these grants through a mechanism that is easily managed at the individual campus level. And Oregon has developed a proposed plan that will make the expected contribution of students and their families more compatible with the limited resources available to fund higher education in current times.

The reason many young people are unmotivated and non-aspiring is that they do not believe it possible to continue their education.

The issue of transparency

Too often the people we want to help do not understand financial aid because we have not found effective ways to communicate what is available. Part of the problem here is the timidity of government to "commit." The federal Pell Grant program is now more than thirty years old. This being the case, why can't it commit to a 13-year-old eighth-grader whose family lives below the poverty line that he or she will absolutely receive a Pell grant when matriculating in a college or university? We all know the arguments. It is because today's government cannot legally commit resources from a future government, and because a particular student living in poverty might be one of the 2 percent who will eventually get out of poverty before going to college. These arguments make it unlikely that change will occur at the federal level.

States, however, do not have to be caught in the same game. Minnesota's Shared Responsibility Plan makes it clear to students what their obligations are, what their parents' obligations are, and what the government will supply through federal or state programs. Indiana and Oklahoma have also created programs intended to make it clear to all their citizens that they can afford to attend college if they simply do their part by preparing well both financially and educationally.

We need to find ways to get honest, accurate information to students and their families early enough that they aspire to a brighter future through participation and success in postsecondary education.

Failure to make policies complement each other

Too often states have an array of policies, each intended to advance the agenda of student success though not designed to complement one another. In fact, occasionally these well-meaning policies actually work against access to success in a P-16 paradigm.

With respect to financial aid, the most obvious obstacle is the lack of integration of financial aid, tuition, and institutional support financing policies. In most states, the responsible governing or coordinating board makes a request for state appropriations for their institutions. Generally another responsible body makes a request for financial aid

from a judgment of likely need, even though it has no idea what tuition will be when the student enrolls. Some time later the responsible boards or legislature make a political or reasoned decision about how much tuition will increase, and institutions make some decisions about how much they will individually commit to financial aid from their own resources. This process is not designed to assure adequacy of student financial aid or to provide much transparency to prospective students and their families. States must find a way to bring these discussions together and develop and manage their finances in ways that recognize the interrelated nature of financial aid, tuition, and institutional support.

While there are few good models to follow, some have begun to evolve. In a number of states there is at least recognition in current policy of the relationship between tuition and financial aid. Oregon and Arizona are considering substantial changes in the way these two components of higher education finance are conceived and managed. Too often, however, we fail to appreciate the importance of the third leg of higher education finance – institutional support – in supporting access. We think of institutional support as the quality leg and not an access leg. Yet, if institutional support is insufficient, no amount of financial aid will assure access because the institutions will not have the services in place to meet the needs of financially and educationally at-risk students.

> The reason these programs are so convoluted is simply that the focus is on the wrong place; they are designed to serve the needs of institutions and government first and foremost, not of students.

As students increasingly participate in early college options – dual enrollment, international baccalaureate, Advanced Placement, etc. – it becomes imperative that public policy be framed and pursued as a P-16 strategy. Too often today these programs, while highly approved of by the public, provide little incentive for institutional buy-in at either the high school or college level. Again, though, there are models emerging that are worth watching and perhaps replicating. The Oklahoma Higher Learning Access Program (OHLAP) warrants special mention. It rewards not only students that succeed but also the high schools they attended for helping them succeed; ultimately the program helps the colleges these students attend through a well-funded financial aid award.

In sum, financial aid must be an integral component of an effective P-16 strategy for increasing student success. Without it, an essential component in the overall strategy would be absent from planning and management, and the public policy objective to enhance equal opportunity would be lost.

References

American Council on Education. 2001. "ACE Survey Shows Americans Value Higher Education, But Remain Skeptical About Some Issues." *Higher Education and National Affairs*, vol. 50, no. 1.

American Council on Education. 2002. *Attitudes Toward Public Higher Education: National Survey Results*. Washington, DC: American Council on Education.

Choy, Susan. 2002. *Access and Persistence: Findings from 10 Years of Longitudinal Research on Students*. Washington DC: American Council on Education.

Dynarski, Susan M. and, Judith E. Scott-Clayton. 2006. *The Cost of Complexity in Federal Student Aid: Lessons from Optimal Tax Theory and Behavioral Economics*. NBER Working Paper No. W12227. Available at SSRN: http://ssrn.com/abstract=902579.

Florida Postsecondary Education Planning Commission. 1999. *Florida's Bright Futures Scholarship Program: A Baseline Evaluation*. Tallahassee, Florida: Florida Postsecondary Education Planning Commission.

Heller, Donald E. 2001. *The Effects of Tuition Prices and Financial Aid on Enrollment in Higher Education: California and the Nation*. Rancho Cordova, California: EdFund.

Jones, Dennis P. and Karen Paulson. 2001. *Developing and Maintaining the Information Infrastructure for State Level Higher Education Policymaking*. Boulder, Colorado: National Center for Higher Education Management Systems.

Kane, Thomas J. 2003. *A Quasi-Experimental Estimate of the Impact of Financial Aid on College-Going*. NBER Working Paper No. W9703. Available at SSRN: http://ssrn.com/abstract=408199

King, Jacqueline E. 2002. *Crucial Choices: How Students' Financial Decisions Affect Their Academic Success*. Washington, DC: American Council on Education.

Longanecker, David A. 2002. "Ensuring Access through Integrated Financing Policy: Observations by David A. Longanecker." *Network News*. Denver: State Higher Education Executive Officers.

National Center for Public Policy and Higher Education. 2002. *Measuring Up 2002: The State-by-State Report Card for Higher Education*. San Jose, California: National Center for Public Policy and Higher Education.

St. John, Edward P., Glenda D. Musoba, Ada B. Simmons, and Choong-Geun Chung. 2002. *Meeting the Access Challenge: Indiana's Twenty-first Century Scholars Program*. Indianapolis: The Lumina Foundation for Education.

U.S. Department of Education, National Center for Education Statistics. 2000. *Low-Income Students: Who They Are and How They Pay for Their Education*. Washington, DC: Government Printing Office.

Success in College[1]

By George D. Kuh

Javier is the first in his family to go to college. His residence hall houses 600 other first-year students, but no one on his floor is in any of his classes, so he is pretty much on his own when it comes to studying.

Nicole left college after her first year to get married. Now divorced with a child, she works 30 hours a week and is taking two courses this term. Her college experience is limited mostly to finding a place to park near campus and going to class.

Sarah struggled with her writing all through high school. After three semesters of college, only her composition course required a few short papers, while all her tests have been multiple-choice or true-false. She is very worried, given that two of her finals this term will be essay exams.

Tens of thousands of undergraduates today are like Javier, Nicole and Sarah. They must contend with one or more circumstances that seriously challenge their ability to earn a baccalaureate degree. As many as four-fifths of high school graduates need some form of postsecondary education (McCabe, 2000) to prepare them to live an economically self-sufficient life and to deal with the increasingly complex social, political and cultural issues they will face. And a college degree remains an attractive investment – the million dollar promise, which is the gap between the lifetime earnings of the average college graduate compared with lifetime earnings for the average high school graduate (Pennington, 2004). Unfortunately, many students who start college do not finish; as a result they do not realize these and other benefits. Disproportionate numbers of those who drop out are from historically underserved groups. Now more than ever, colleges and universities must rise to the occasion and do whatever is necessary to help their students survive and thrive in college.

In this essay, I identify some promising policy and programmatic levers that institutions can use to foster student success. As discussed in earlier chapters, the trajectory for academic success in college is established long before students matriculate. Socioeconomic background, financial means, college readiness, and support from home substantially influence whether a person will earn a credential or degree. There is no substitute, for example, for rigorous academic preparation in elementary and secondary school. If students do

[1] This chapter is an expanded version of Dr. Kuh's essay, "How to Help Students Achieve." *The Chronicle of Higher Education*, 53(41), B12-13. Many of the institutional examples of effective practice are drawn from a study of high performing colleges and universities described in *Student Success in College* (Kuh et al., 2005).

not attain grade-level proficiencies – particularly in math and reading – by the eighth-grade, they are much less likely to acquire the needed skills in high school, which makes early intervention even more important. And if students do not perform well in the right kinds of courses in high school, including four years of English and advanced mathematics classes (such as Algebra II, Pre-calculus, Calculus), interventions later can have only modest effects on their chances to succeed and complete a baccalaureate degree.

In addition to academic preparation, family and community support are indispensable to students in raising educational aspirations, becoming college-prepared, and persisting. Effective school-community partnerships are essential to leveling the playing field, such as Indiana's 21st Century Scholars Program and GEAR UP programs that involve family members who are then more likely to offer moral support for preparing for college, applying for college admission and financial aid, matriculating, and persisting. Certainly, having a sufficient amount of the right kind of money (a reasonable mix of grants, work, and loans) is necessary as is accurate information about college, including real costs and aid availability. Unfortunately, at-risk students have less accurate information about college and get less encouragement and support for preparing for and attending college from their family and friends than their more-advantaged peers.

All this is to say that students do not come to postsecondary education *tabula rasa*. Rather, they are the products of many years of complex interactions with their family of origin and cultural, social, political, and educational environments. As a result, once in college, a student's chances for graduating can vary widely. Only about one-half of community college students return to college for their second year of study. High-risk students drop out at a higher rate than their peers (Choy, 2001; Muraskin et al, 2004; SHEEO, 2005; Swail et al., 2003). In large part, this is because three-fifths of students in public 2-year colleges and one-quarter in 4-year colleges and universities require one or more years of remedial coursework (Adelman, 2005; Horn et al., 2004). More than one-fourth of 4-year college students who have to take three or more remedial classes leave college after the first year (Adelman, 2005; Community College Survey of Student Engagement, 2005; National Research Council, 2004). In fact, as the number of required developmental courses increases, so do the odds that the student will drop out (Burley et al., 2001; Community College Survey of Student Engagement, 2005).

Now more than ever, colleges and universities must rise to the occasion and do whatever is necessary to help their students survive and thrive in college.

Of the 45 percent of all students who fail to complete their degrees, only one-quarter are dismissed for poor academic performance. Disappointing performance can discourage students who are struggling. Changes in the American family structure are another factor, as more students come to campus with psychological challenges that, if unattended, can have a debilitating effect on their academic performance and social adjustment.

Whatever the reasons so many students do not achieve their postsecondary educational goals or benefit at optimal levels from the college experience, the waste of human talent and potential is unconscionable. What can colleges and universities do to uphold their share of the social contract and help more students succeed?

In addition to academic preparation, family and community support are indispensable to students in raising educational aspirations, becoming college-prepared, and persisting.

Stepping Stones to Student Success in College

Whether students like Javier, Nicole, and Sarah persevere and benefit in desired ways from the college experience is largely the result of their individual effort and engagement in educationally purposeful activities. That is, the time and energy that students devote to their studies and other effective educational activities positively influences their grades and persistence.

Pascarella and Terenzini came to a similar conclusion in their book, *How College Affects Students* (2005), after summarizing thousands of studies. As Lee Shulman (2007), the president of the Carnegie Foundation for the Advancement of Teaching, explains, because student engagement is a precursor for knowledge and understanding, it is both a proxy for learning as well as a desired outcome in itself. By being engaged – something not represented in outcomes measures – students develop habits that promise to stand them in good stead for a lifetime of continuous learning. In addition, recent studies show that engagement has compensatory effects, in that those students who start college less advantaged tend to benefit more in terms of their grades, for example, than higher achieving students (Cruce et al., 2006; Kuh et al., 2007).

Taken together, a robust set of research findings suggest concrete steps that institutions can take to engage students like Javier, Sarah, and Nicole.

Feature student success in the institution's enacted educational mission and core purposes.

Before faculty and staff can be expected to invest time and energy fostering student success, the institution must emphasize the importance of student success to attaining its mission. This was a distinguishing characteristic of the 20 strong performing colleges we studied several years ago (Kuh et al., 2005). These schools made a clear, compelling case for the importance of student success by articulating a mindscape or preferred vision of the future that enabled faculty, staff and others to see how their daily work contributes to student achievement. Asking questions like "What are we doing?" and "Why are we doing it this way?" helps people to determine whether established practices are

still relevant to the changing needs and interests of students, evolving institutional conditions, and why and how proposed interventions would address student and institutional needs. Staying focused on key objectives demands that people continually reflect on what they are trying to achieve (Senge, 1999).

In addition, senior leaders must articulate the mission in plain language to stakeholders and define what student success means in the local context. They must also publicly champion undergraduate education and student success, reminding people in annual state-of-the-campus reports, governing board meetings, convocations, and so on, about the institution's commitment to high quality undergraduate education and its centrality to the institution's mission. However, talking and writing about student success is not sufficient to ensure that students will have access to and profitably use the resources they need. With so many faculty, staff, and students saying they are overextended, we should not be surprised that many people do not understand what the institution stands for and wishes to accomplish with its undergraduate program. Different groups resonate with different approaches and use different words to communicate the same concepts. One tactic for keeping this priority visible campus-wide is to select an annual theme for an academic year, around which events can be organized.

Before faculty and staff can be expected to invest time and energy fostering student success, the institution must emphasize the importance of student success to attaining its mission.

Set performance standards for students at high but attainable levels consistent with their academic preparation.

Colleges and universities have two non-negotiable obligations to their students. The first is to establish high performance expectations, inside and outside the classroom, appropriate to students' abilities and aspirations. The vast majority of students learn more when performance standards require a level of effort greater than what students would ordinarily put forth if not otherwise challenged. To do this, faculty and staff must first understand who their students are, what they are prepared to do academically, and what they expect of the institution and themselves.

The second obligation institutions have to their students is to give them prompt, frequent feedback as to how well they are meeting these expectations. Writing papers, for example, in the absence of feedback may simply become redundant exercises in mediocrity. Many new students – especially those from historically underserved groups – do not fully understand and appreciate their role as learners. Faculty members, advisors, and student affairs professionals must provide periodic feedback as to the quality of students' performance. Waiting until mid-term examinations are over to give students an idea of

how well they are performing is often too late. Far fewer students use campus learning and support services than say they will when starting college (National Survey of Student Engagement, 2005). Since 1995, every George Mason University student has been required to take freshman composition, advanced composition, and at least one writing-intensive course in the major. Some writing-intensive courses require writing portfolios (for example, nursing) or design projects (for example, engineering). In some majors, such as Public and International Affairs, every course at the 300-level and above is a writing-intensive course. As a result, students think more critically and work harder. At Sweet Briar College, faculty members engage students in a cycle of continuous feedback and improvement where it is not unusual for students to receive one or more pages of typed notes directed to a work product, pointing out how it can be improved (Kuh et al., 2005).

> The vast majority of students learn more when performance standards require a level of effort greater than what students would ordinarily put forth if not otherwise challenged.

Teach first-year students how to make good use of college resources as early as possible.

Most institutions offer a blend of summer orientation or advising sessions and a fall welcome week. While helpful, those practices cannot teach most students all they need to know and do to make the most of college. Simply living on campus increases the odds that a student like Javier will return for a second year of study, but it does not guarantee that he will take advantage of academic support services, participate in co-curricular activities, or interact with faculty members or friends on a meaningful level. That is especially the case for first-generation students who don't know what to expect from college life.

Institutions, that are serious about helping more vulnerable students succeed, employ other mechanisms like first-year seminars, supplemental instruction, and placement tests that ensure students are in courses for which they are prepared. They also provide "intrusive advising," such as George Mason University's academic advising office which contacts students with low grades who have not declared a major and Ursinus College where a residence life staff member or faculty advisor will meet with students who seem to be struggling academically or socially (Kuh et al., 2005). Prompt feedback about academic performance is also essential, since midterm-exam time is often too late for a student to salvage a semester.

In addition, one increasingly common activity proven to be effective for students like Javier is participating in a learning community. For example, freshman students in residence-based learning communities at the University of Missouri at Columbia live in

the same building and take the same three core courses and an additional class focused on skills needed to succeed in college, giving them common ground both in and out of the classroom.

> Institutions, that are serious about helping more vulnerable students succeed, employ other mechanisms like first-year seminars, supplemental instruction, and placement tests that ensure students are in courses for which they are prepared.

NSSE results show that students who live in learning communities tend to interact more with their professors and diverse peers, study more, and excel at synthesizing material and analyzing problems. They also report gaining more from their college experience. Moreover, the "engagement advantage" for students in learning communities lasts through senior year, suggesting that this experience – which most students have in their first college year – positively affects what they do later in college. Vincent Tinto (Tinto, 1997; Tinto et al., 1995) and researchers at the Washington Center for Improving the Quality of Undergraduate Education at Evergreen State College have found that non-residential learning communities generally have similar conditional, salutary effects for community college students. Thus, it is imperative that we determine the institutional policies and practices that work best with different groups of students (low income, first generation, ethnic minorities, immigrants, and so forth) at different types of institutions (2- and 4-year colleges, public and private schools, and private for-profit entities) at different points in time. Are active and collaborative learning activities appropriate for all students? Electronic technology, which permits instructors to offer just-in-time assistance to students who are having difficulty mastering concepts, offers great promise for increasing student learning and keeping students motivated to complete learning tasks and to persist.

Make the classroom the locus of community.

Decades ago, when most undergraduates lived near their classmates and teachers, proximity and serendipity established the social order and instilled shared values and understandings. Today, the majority of students are like Nicole; they commute to school and work many hours a week. As a result, they spend a limited amount of time on campus, and have less contact with faculty members (National Survey of Student Engagement, 2006).

For commuter students, who comprise the growing majority of undergraduates, the classroom is the only venue where they regularly have face-to-face contact with faculty or staff members and other students, learn how the institution works, and absorb the

campus culture. That makes professors' jobs in the classroom much more demanding and complicated. They must cultivate an atmosphere in which a group of strangers will listen attentively to others with respect, and challenge and support one another to previously unimagined levels of academic performance (Kuh et al., 2007).

Professors who are skilled at managing class discussion skillfully employ cooperative learning activities to get students working together during and after class on meaningful tasks. Along with subject matter, they teach institutional values and academic norms; they inform students about campus events and such non-trivial matters as course registration deadlines and when and how to apply for financial aid.

Faculty members should not have to do this alone, however. At Indiana University – Purdue University at Indianapolis and the University of Texas at El Paso, student affairs professionals, librarians, and other staff familiar with effective approaches to community-building work with professors to design rich, engaging classroom experiences that complement the institution's academic values and students' preferred learning styles. For example, at UTEP, the instructional team for the required first-year Seminar in Critical Inquiry is composed of a faculty member, an undergraduate peer leader, and a librarian. They emphasize active learning approaches, such as group projects that sometimes take students off campus and into their home communities, an effective way to engage students who prefer concrete, hands-on learning activities (Kuh et al., 2005).

This kind of culture-building collaboration of faculty members, with student affairs professionals and other staff means that faculty members must also be *more intentional* about teaching institutional values and traditions and informing students about campus events, procedures, and deadlines such as registration. Faculty members can also use cooperative-learning activities to bring students together to work after class on meaningful tasks.

> Faculty must cultivate an atmosphere in which a group of strangers will listen attentively to others with respect, and challenge and support one another to previously unimagined levels of academic performance.

Develop networks and early-warning systems to support students when they need help.

Three-fifths of students in public 2-year colleges and one-quarter of students in 4-year institutions must complete at least one remedial course. No wonder nine out of every ten students starting college say they intend to use an academic-assistance or learning-skills center. But by the end of the first year only about half as many have done so (National Survey of Student Engagement, 2006).

To make sure that students who need help get it, some colleges create first-year student "tag teams" composed of some combination of faculty members, peer mentors, advisors, student affairs staff, librarians and other staff. Academic-support staff members monitor class-attendance patterns, drop/add information, early-semester and midterm grades, and pre-registration information to identify and intervene with students who are experiencing academic difficulties. For example, instructors in Fayetteville State University's Early Alert program contact first-year student mentors and University College to alert them about students experiencing difficulty during the first two weeks of the semester. Mentors contact students to advise and refer as appropriate. At Wheaton College in Massachusetts, a first-year student's advising team is made up of a faculty member, a student preceptor, and an administrative advisor, usually a student life staff member or librarian (Kuh et al., 2005). Other programs that have proven successful include supplemental instruction, peer mentoring, theme-based campus housing, on-campus work, internships, and service learning (Kuh et al., 2007).

Connect every student in a meaningful way with some activity or positive role model.

When students are responsible for tasks that require daily decisions over an extended period, they become invested in the activity which deepens their commitment to the college and their studies. Members of athletic teams, choirs and bands, and fraternities and sororities tend to graduate at higher rates, in part because the momentum of the group carries them forward, buoying them during difficult times. They also derive personal satisfaction by being a part of something larger than themselves. Working on campus, writing for the student newspaper, or conducting research with a faculty member can be a life changing experience.

Connecting students to somebody or something worthwhile is everyone's business and can have numerous benefits, not the least of which is having another source of support and encouragement for persevering when times get tough. Some University of Kansas faculty members occasionally take a moment of class time to encourage students to get involved with a campus-based organization or to volunteer in the local community. Advisers, counselors, student-life staff members, and faculty members can make a big difference in the life of more than a few students by encouraging them to get involved with one or more of these kinds of activities or people. At Macalester College the instructor of the required First Year Seminar has a dual role – seminar leader and advisor. As a result, faculty members learn firsthand a good deal about their advisees' intellectual interests and strengths and limitations. Moreover, they see their advisees several times a week, which provides frequent opportunities for informal conversations and useful information about academic and social adjustment (Kuh et al., 2005).

If a program or practice works, make it widely available.

Most institutions have small, boutique-like programs for honors students or student-government leaders, but they typically include only a small fraction of undergraduates. Granted, no single teaching approach, classroom structure, or out-of-class experience

will be effective with every student. But we should not ignore evidence that students who encounter diverse perspectives in their classes benefit more in desirable ways than their counterparts with less exposure, or that students who apply what they are learning in classes to real-world problems – as often happens during well-designed internships, study abroad, or service learning – deepen their learning and sharpen their critical thinking skills.

In fact, if a program is successful, some students should be required to take it. Left to their own devices, students (and faculty members) do not always choose wisely, as Carol A. Twigg, president and CEO of the National Center for Academic Transformation, discovered in her successful experiments with technology-enriched course redesigns. She concluded that first-year students "don't do optional" – even when it is in their interest to do so (Twigg, 2006).

Connecting students to somebody or something worthwhile is everyone's business and can have numerous benefits, not the least of which is having another source of support and encouragement for persevering when times get tough.

Remove obstacles to student engagement and success.

One roadblock found on scores of campuses is "the runaround." Variations abound, but the basic storyline is that no matter where students turn, they cannot get the information or help they need, whether from residence-life administrators, the registrar, or others. That stands in stark contrast to colleges marked by a sense of positive restlessness, where people constantly are asking how they can improve what they do, and administrators regularly evaluate campus priorities, policies, and programs. Such examinations can be formal, such as program reviews or accreditation self-studies. For example, the University of Michigan conducted six major studies of the quality of the undergraduate experience between the mid-1980s and 2000 (Kuh et al., 2005).

Informal reviews stimulated by faculty curiosity or visionary leaders also can lead to positive change. At Indiana University Bloomington more than a third of the students in a particular math course in a given term typically received a D or F grade or withdrew from the class. The math faculty redesigned this one-semester course and, among other things, created a reduced pace two-semester offering that covers the same material and uses the same exams. The percentage of students who now complete the course with a C or better grade has jumped by about 30 percent (Smith, 2003).

Re-culture the campus.

Sooner or later, despite well-intentioned policy and programmatic interventions, campus culture must be addressed. Indeed, virtually every study of high performing organizations points to culture as the single most important element that must be altered and managed in order to change what an organization or institution values and how it acts. This is also the case for shifting a campus to a student-success paradigm.

Culture is the tie that binds, the "invisible tapestry" (Kuh et al., 1988) that connects and gives meaning to activities and events. Norms, values, and tacit assumptions and beliefs about students work together to provide purpose and direction for community members and their activities, and to highlight institutional priorities. Thus, as with so many aspects of institutional effectiveness, the whole of the cultural properties that comprise and contribute to student success is greater than the sum of the parts.

Culture is the tie that binds, the "invisible tapestry" that connects and gives meaning to activities and events.

Changing campus culture is a challenging, time-consuming endeavor. In addition, campus cultures, even those that are high performing by various standards and where student success is valued (Kuh et al., 2005), have some contested terrain. Every college or university will face contradictions, inconsistencies, and lack of consensus about critical issues; diverse and sometimes competing perspectives exist about the institution's current priorities and aspirations. Such differences in views and values should not be viewed necessarily as shortcomings or as evidence of a dysfunctional culture (Kuh et al., 1991; Martin, 2002). The aspiration is to make student success central to the institutional mission and to emphasize assumptions and beliefs that are congenial to this purpose. It is also essential to put reward systems and policies in place that value undergraduate education and support student success.

One way to determine what aspects of an institution's culture need attention is to conduct a cultural audit that focuses on, among other things, artifacts such as rituals, traditions, stories, myths, ceremonies, language, norms, values, or widely-held beliefs about who can learn what and who cannot, who deserves an education and who does not, and the importance of certain goals, activities, and relationships (Kuh et al., 1988). Central to such an undertaking is systematically answering diagnostic queries including:

- To what extent is your school's culture clear, coherent, and strong?
- Does the culture of your institution enhance or hinder student success?
- In what ways are the artifacts, values, and beliefs of the dominant student culture and student subcultures consistent with, or contradictory to, the educational goals of the institution?

- What elements of the institutional and/or student cultures should be preserved or changed to achieve more consistency with the educational mission? How might this change occur?
- Are there elements of the culture that need to be modified in order to promote experimentation with promising pedagogical approaches or more consistent use of effective educational practices that enhance student learning and success? How might this be done?

Kuh, Kinzie, Schuh and Whitt (2005) created the Inventory for Student Engagement and Success as an institutional self-study guide for assessing the extent to which campus cultures support student success, and to identify policies and practices that need attention in order to encourage more students to survive and thrive in college.

Conclusion

We know about many of the factors that facilitate and inhibit earning a bachelor's degree. And we also know a good deal about some interventions that promise to increase this number if they are implemented effectively and reach large numbers of students. Of course we need to learn more, especially about the conditional effects of our programs and practices – the kinds of interventions that benefit some students more than others.

Realistically, colleges and universities are limited in terms of what they can do to encourage student success. An institution of higher education cannot change the lineage of its students. Campus cultures do not change easily or willingly. Too many long-held beliefs and standard operating practices – some of which may be counterproductive – are tightly woven into an institution's ethos and embedded in the psyche of faculty leaders and senior administrators. Even so, most institutions can change the way students approach college and what they do after they arrive.

Even when institutions establish the programs and practices like those that I've outlined and faculty members use effective teaching and learning approaches, such efforts will not in every case make up for students' inadequate academic preparation in elementary and secondary school. Still, we can do better by the likes of Javier, Sarah, and Nicole by engaging them in purposeful activities that enhance their learning and personal development. The real question is whether we have the will to increase the odds that more students will get ready, get in, and get through.

References

Adelman, C. 2005. Educational "anticipations" of traditional age community college students: A prolegomena to any future accountability indicators. *Journal of Applied Research in the Community College*, 12(1), 93–107.

Burley, A., Cejda, B., and Butner, B. 2001. *Dropout and stopout patterns among developmental education students in Texas community colleges*. Community College Journal of Research and Practice, 25(10), 767–782.

Choy, S. P. 2001. *Students whose parents did not go to college: Postsecondary access, persistence, and attainment*. (NCES 2001–126). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

Community College Survey of Student Engagement. 2005. *Engaging students, challenging the odds: 2005 findings*. Austin, TX: Community College Survey of Student Engagement.

Cruce, T., Wolniak, G.C., Seifert, T.A., and Pascarella, E.T. 2006. Impacts of good practices on cognitive development, learning orientations, and graduate degree plans during the first year of college. *Journal of College Student Development*, 47, 365-383.

Horn, L. J., and Berger, R. 2004. *College persistence on the rise? Changes in five-year degree completion and postsecondary persistence rates between 1994 and 2000*. (NCES 2005–156). Washington, DC: National Center for Education Statistics, U.S. Department of Education.

Kuh, G.D., Kinzie, J., Buckley, J., Bridges, B., and Hayek, J.C. 2007. *Piecing together the student success puzzle: Research, propositions, and recommendations*. ASHE Higher Education Report, 32(5). San Francisco: Jossey-Bass.

Kuh, G. D., Kinzie, J., Schuh, J. H., and Whitt, E. J. 2005. *Assessing conditions to enhance educational effectiveness: The inventory for student engagement and success*. San Francisco: Jossey-Bass.

Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E. J. and Associates 2005. *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.

Kuh, G. D., and others. 1991. *Involving colleges: Successful approaches to fostering student learning and development outside the classroom*. San Francisco: Jossey-Bass.

Kuh, G. D., and Whitt, E. J. 1988. *The invisible tapestry: Culture in American colleges and universities*. ASHE-ERIC Higher Education Report No. 1. Washington, DC: School of Education and Human Development, The George Washington University.

McCabe, R. H. 2000. *No one to waste: A report to public decision-makers and community college leaders*. Washington, DC: American Association of Community Colleges.

Martin, J. 2002. *Organizational culture: Mapping the terrain*. Thousand Oaks, CA: Sage.

Muraskin, L., and Lee, J., with Wilner, A., and Swail, W. S. 2004. *Raising the graduation rates of low-income college students*. Washington, DC: Pell Institute for the Study of Opportunity in Higher Education.

National Research Council. 2004. *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: National Academies Press.

National Survey of Student Engagement. 2005. *Student engagement: Exploring different dimensions of student engagement*. Bloomington: Center for Postsecondary Research, Indiana University.

National Survey of Student Engagement. 2006. *Engaged learning: Fostering success of all students*. Bloomington, IN: Indiana University Center for Postsecondary Research.

Pascarella, E .T. and Terenzini, P. T. 2005. *How college affects students: A third decade of research*. San Francisco: Jossey-Bass.

Pennington, H. 2004. *Fast Track to College: Increasing Postsecondary Success for All Students*. Report Prepared for: Renewing Our Schools, Securing Our Future: A National Task Force on Public Education. Available at: http://www.americanprogress.org/kf/fast-track-final%2012%2001.pdf

Senge, P. M. 1999. *The dance of change: The challenges of sustaining momentum in learning organizations*. New York: Currency/Doubleday.

Shulman, L.S. 2007. *Counting and recounting: Assessment and the quest for accountability*. Change, 39(1), 20-25.

Smith, W.R. 2003. *About Campus*, 8(1), 3-8.

State Higher Education Executive Officers. 2005. Accountability for better results – a national imperative for higher education. *Network News*, 24(1), 1–4.

Swail, W. S., with Redd, K. E., and Perna, L. W. 2003. *Retaining minority students in higher education: A framework for success*. ASHE-ERIC Higher Education Report No. 2. Washington, DC: School of Education and Human Development, The George Washington University.

Tinto, V. 1997. Enhancing learning via community. *Thought and Action*, 13(1), 53–58.

Tinto, V., Love, A. G, and Russo, P. 1995. *Building learning communities for new students: A summary of research findings of the collaborative learning project*. University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

Twigg, Carol. 2006. “Freshmen Don’t Do Optional.” *The Learning MarketSpace*. Available at the National Center for Academic Transformation: http://www.thencat.org/Newsletters/Apr06.htm#1.

Data & Accountability Systems[1]

By Hans P. L'Orange

The undeniable need to increase the depth and breadth of educational achievement in the United States has raised the interest in educational standards, student-level data, and accountability systems. It has also raised concerns and created understandable resistance as educators and policymakers, as well as parents and other stakeholders, energetically debate what kinds of standards, data, and accountability systems are needed to help improve educational achievement.

While there is legitimate debate over many details, it is clear that the data systems in many states were never designed to meet the challenges envisioned by new accountability requirements. These systems were originally constructed to provide data for routine reports or to audit expenditures; they are inadequate to meet the assessment and accountability challenges of the twenty-first century. Data systems designed for the new century will need to provide a comprehensive foundation for documenting the achievement of students, schools, and colleges, support evolving educational initiatives, and improve the ability to respond to questions about student achievement and a state's investment in education.

What is emerging is a need for information that is comprehensive and focused – capable of enabling educators to improve instruction, as well as describe student achievement across multiple sectors and report on performance in particular areas. Ideally, an integrated data system across all levels of education will meet those combined needs. In reality, two systems currently exist: one for K-12 education and another for postsecondary education. Neither system is adequate by itself, and, because they often are poorly aligned, they can be even weaker when linked together.

The purpose of this essay is to help advance the discussions occurring in most states by describing the kinds of data and accountability systems needed to help more students prepare for and succeed in postsecondary education. Included is (1) a description of an effective K-16 data and accountability

[1] An earlier version of this chapter, published in 2003, was co-written by Hans P. L'Orange and Richard A. Voorhees.

system; (2) an overview of the general status of K-12 and postsecondary data systems; (3) examples of promising state practices; and (4) some concluding recommendations.

An Effective K-16 Data and Accountability System

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 students, programs, and schools that are successful, in addition to those that need attention and assistance to become more successful. Finally, aligned systems help K-12 students and teachers focus on the curricula and content that must be mastered to be successful in postsecondary education. As state systems for data and accountability evolve – in particular, as they gain the ability to analyze student progress over time and capture a wide range of educational influences – they hold the promise of providing the tools needed to monitor and improve performance.

Successful accountability systems focus on student performance in relationship to established criteria, provide common rubrics for evaluating student and school performance, and improve instructional and educational attainment.

Successful accountability systems become more than simply a reporting mechanism. They focus on student performance in relationship to established criteria, provide common rubrics for evaluating student and school performance, and improve instructional and educational attainment. Good systems can be used to assess and improve K-12 achievement that, in turn, can result in more students meeting admission requirements and achieving postsecondary success. Successful accountability systems capture data on student learning activities, assessment of those learning activities, and characteristics of the schools in which students are enrolled. Data on learning activity often consists of course content, grades, class size, and information about teachers associated with those courses. Exemplary data systems move beyond traditional measures and assess how well a given set of learning activities contributes to student learning. Additional school-level data should consist of numbers of students served from families below the poverty line, student-teacher ratios, dropout rates, measures of school climate, and measurements of parental and community involvement.

The actual decisions about what constitutes assessment data must derive from a given state's goals for its accountability system. Critical analysis of the purposes of the assessment is required; what questions does the state wish to address? Some states choose a performance model that focuses on the numbers of students that meet or exceed state

standards. Others use a growth model, focusing on the progress of students over time. The choice between a performance or growth model dictates the timing for collecting assessment data and the nature of the assessment methodology. States typically choose to collect standard test data at predefined grade levels and most often by a survey test. This point-in-time assessment scheme is most often used to compare performance across schools, not to make judgments about the academic growth of individual students. Performance models generally assess students periodically to obtain a portrait of student achievement at that time. A growth model, on the other hand, implies pre- and post-assessment, either within a given grade level or across grade levels.

States face other critical decisions when creating an assessment system. Each state needs to determine whether off-the-shelf survey tests meet its assessment needs and whether the content of these commercially produced assessments aligns with the state's own standards. Failing this alignment, a state needs to decide whether a survey test created specifically for its curricular standards is a prudent investment. States also need to consider whether the results of alternative assessments – e.g., portfolios, demonstrations, and other non-test documentation of learning – should be included in data systems. Each of these techniques requires that responsible parties make firm judgments about the validity of assessments and their reliability, especially in high-stakes environments.

Alternatives to point-in-time aggregate data and assessments do exist. Complex longitudinal systems are designed to track the progress of individual students and require collecting individual student data over time. Such systems, typically called “unit record” systems, collect a wide range of demographic and performance data at regular, systematic intervals to support analysis. Unit record systems have several other advantages over aggregate systems. They require that consistent definitions be used for individual variables in order to make valid comparisons possible. Statewide unit record systems also provide a mechanism to ensure the data submitted by providers are accurate, especially when they are used to compare schools. Finally, in addition to generating routine reports, unit record systems can produce answers to “what if” questions that frequently take accountability discussions to higher levels. Unit record systems are characterized by the presence of a unique identification number that allows an individual student’s data to be linked across grades and schools. A system of this sort also makes possible the linkage of assessment data to demographic and program records.

A statewide unit record system makes possible the linkage of assessment data to demographic and program records.

Interest in systems with these characteristics continues to grow. Both K-12 and postsecondary data systems are being designed and redesigned to address accountability and instructional improvement concerns. National interest in accountability and improvement has also focused conversations on the kinds of systems required. The National Commission on Accountability, co-chaired by former Secretary of Education, Richard W.

Riley, and former Governor of Oklahoma, Frank Keating, was formed to review ways that states have improved performance in higher education and their experience in using accountability systems toward that end.[2] Their report, *Accountability for Better Results: A National Imperative for Higher Education*, recommends an ongoing and vigorous dialogue targeted on the educational needs of the American people and includes a series of recommendations designed to improve student preparation, the public investment in educational priorities, teaching and research, cost-effectiveness, and the availability of key data. The 2005 report notes "[we] need accountability to give us dependable, valid information to monitor results, target problems, and mobilize the will, resources, and creativity to improve performance." The report also states that "[better] accountability requires substantial improvements in the quality, cost-effectiveness, and utilization of data." One of the Committee's recommendations is for "statewide data systems across all levels of education to help inform policy and budgetary decisions that will close achievement gaps and promote greater equity in allocating resources."

One recommendation from the National Commission on Accountability is for "statewide data systems across all levels of education to help inform policy and budgetary decisions that will close achievement gaps and promote greater equity in allocating resources."

The Commission on the Future of Higher Education, convened by Secretary of Education Margaret Spellings, raised similar concerns and issued similar recommendations in their 2006 report, *A Test of Leadership: Charting the Future of U.S. Higher Education*, which states, "the lack of useful data and accountability hinders policymakers and the public from making informed decisions and prevents higher education from demonstrating its contribution to the public good."[3] The Secretary's Commission calls for higher education to change from a system primarily based on reputation to one based on performance. They recommended the creation of "a robust culture of accountability and transparency" and "a consumer-friendly information database on higher education with useful, reliable information." The Commission also supports "the development of a *privacy-protected* higher education information system that collects, analyzes and uses student-level data as a vital tool for accountability, policy-making, and consumer choice."

These discussions and reports, along with numerous others, continue to draw attention to K-12 and postsecondary accountability and the data – both available and required – to answer the questions being asked.

The General Status of K-12 and Postsecondary Data Systems

For most of the 20th century, states were content to let patterns of student achievement follow their own course – students who performed well in the primary and secondary grades moved on to higher education, while those who performed at a lower level found lower-skilled but reasonably well-paying jobs. With the increasing skill requirements of work and heightened competition in a global economy, states have come to understand more clearly the link between an educated workforce and their own ability to sustain economic growth. The Commission on the Future of Higher Education, among others, have noted not everyone needs to go to college, but everyone needs some postsecondary education. That need brings a different focus to student learning and the benefits gained in secondary schools. As the educational aspirations of the states and the needs of the country have grown, the K-12 standards movement, concerns with educational inequities, and questions about the performance of postsecondary students have also expanded. States are also implementing the accountability standards of the "No Child Left Behind Act" of 2001 (NCLB), which requires assessments in all schools in reading, mathematics, and, eventually, science, in grades three through eight. NCLB requires that every state develop an accountability system; that all students are included; and that standards apply to all schools and students. These requirements have resulted in substantial data collection efforts.

With the increasing skill requirements of work and heightened competition in a global economy, states have come to understand more clearly the link between an educated workforce and their own ability to sustain economic growth.

Prior to NCLB, most states addressed accountability concerns by collecting aggregate data about the average performance of students or groups of students in particular schools. While this effort represented a groundbreaking step, it can be quite limited for two main reasons. First, aggregate data provide "snapshots" of average student performance within individual schools but no information about individual students. This flaw means that individual student data cannot be linked with other elements – such as courses taken and socioeconomic factors – that might influence individual performance. Second, aggregate data shed little light on the performance of students and schools across time. The effects of educational reform cannot be captured in a single slice. Aggregate data cannot be combined adequately to assess progress, or lack thereof, since those students whose performance measures were combined to create aggregate statistics in one year may not be the same students whose performances are combined in the next year.

The good news is that data that can be used for accountability and improvement are, for the most part, plentiful. The data elements for a strong accountability system are in place in many states, even though no single state yet possesses a system sufficient to answer all the questions that are asked. The bad news is that these frequently disparate data are seldom assembled into comprehensive information systems. Many systems have collected student achievement data for many years, but only a handful of states have begun to combine these data with those of other schools and colleges to guide decisions.

The good news is that data that can be used for accountability and improvement are, for the most part, plentiful.

In many states, the challenge is to identify and collect the most relevant data available, align the data from disparate systems, and then use that data effectively. The Data Quality Campaign (DQC)[4] was developed as a national collaborative effort to address these challenges by encouraging and supporting state policymakers to:

- Improve the collection, availability and use of high quality K-12 education data; and
- Implement state longitudinal data systems to improve student achievement.

While acknowledging that each state's education system is unique, the DQC has identified ten essential elements that are critical to a longitudinal data system:

- A unique statewide student identifier that connects student data across key databases across years
- Student-level enrollment, demographic and program participation information
- The ability to match individual students' test records from year to year to measure academic growth
- Information on untested students and the reasons they were not tested
- A teacher identifier system with the ability to match teachers to students
- Student-level transcript information, including information on courses completed and grades earned
- Student-level college readiness test scores
- Student-level graduation and dropout data
- The ability to match student records between the P–12 and higher education systems
- A state data audit system assessing data quality, validity and reliability

A September 2006 survey of state K-12 education agencies, developed by the DQC and the National Center for Educational Accountability (NCEA), assessed each state education agency's information systems in the context of these ten essential elements. The survey noted only one state, Florida, has all ten elements and only ten states have at least eight elements. States as a whole are making progress, however; the survey also notes that only five states have three or fewer elements.[5]

Colleges and universities also require accountability systems, although the purposes of such systems may be somewhat different. Particularly since 1990, state policymakers have become increasingly interested in the productivity and efficiency of public postsecondary systems. Their concern stems from the fact that state resources are declining at the same time that costs and demands for improved access have increased. Repeated surveys by the State Higher Education Executive Officers (SHEEO) confirms that accountability and effectiveness remain one of the top issues for state decision makers; this issue has been close to the top of the list for each of the surveys done over the past decade. The most recent survey confirmed the results from an earlier SHEEO report on performance measures, which noted that state policy agendas for accountability continue to emphasize the dual purposes of improvement and accountability. It also noted that the most commonly used measures for performance reporting are quantitative indicators of "outcome" or "output" including graduation rates (Ruppert, 1998).

Giving answers to many of the questions policymakers now ask will require definitional consistency and comprehensiveness which are frequently missing across institutional systems.

Although most people do not question the overall value of a college education, higher education must make the case to the public and to political leaders that this value is real and that postsecondary education deserves financial support. Demonstrating this value requires robust data and information systems for postsecondary education, as it does for K-12 systems. Over time, data systems have been developed at the institutional level that allow staff to analyze data, generate reports, respond to both internal and external demands, and demonstrate the value of the education that institutions provide. These systems have become quite adept at addressing institutional issues, but they can be limited when used collectively to address state concerns. Giving answers to many of the questions policymakers now ask will require definitional consistency and comprehensiveness which are frequently missing across institutional systems. Many complex issues require coordinated analysis beyond those studies produced by one or more institutions, especially when statewide responses are required to questions about student transfer, occupational placement, and inter-state migration.

Over the past decades, statewide higher education agencies and the federal government have assumed greater roles in the area of data gathering and production and information

management. This process began with the collection, analysis, and reporting of information gathered from the institutions and based on their individual data systems. The information frequently included data on applicants, student enrollments, faculty and staff, finances, and facilities. Over time, data on completions, financial aid, and student courses were added. Like K-12 systems, state higher education organizations and federal agencies began to establish common definitions and reporting formats allowing them to generate meaningful information at the state and federal levels. Eventually many states developed their own statewide databases, which gave them even more analytical capacity, including the ability to compile the information needed for federal reporting.

As noted in the recent report *Critical Connections: Linking States' Unit Record Systems to Track Student Progress* (Ewell and Boeke, 2007) from the National Center for Higher Education Management Systems (NCHEMS) and sponsored by the Lumina Foundation for Education, these systems have some common characteristics. Among the most important of these is the inclusion of electronic unit records unique to each student. In addition, these records frequently are based on data gathered from institutions at specific points of time and maintained centrally. In some ways, these systems are similar to the K-12 unit record systems discussed earlier. As the NCHEMS report notes, 40 states currently have state unit record databases. The ten states that do not have unit record databases are relatively small, and as a result, 81 percent of all headcount enrollments are in states with one or more state-level databases. Eighteen of the databases contain data from the 1970s or 1980s, and half of the databases built in the last decade contain data collected prior to 1995. Federal reporting standards in the Integrated Postsecondary Education Data System (IPEDS) and other required federal reporting have encouraged some consistency of definitions across systems.

Although they have shortcomings, unit record systems are valuable for accountability reporting and performance funding initiatives.

Despite these efforts, the range of data systems varies considerably. Some are very basic, while others are much more complex and contain a wide range of data on students, courses, and grades. In a few states, where state-level financial aid programs are the responsibility of the state agency, data are also included from private institutions. Some states have data links to labor databases; most do not. Other challenges include the fact that not all states collect data at the same point in time and, as noted above, not all states collect the same data elements. Most states don't use the Social Security number as a student identifier because of privacy concerns. Many are taking steps to create new identifiers to meet these concerns. However, the assignment of unique identifiers limits the possibilities for tracking students outside of data systems that do not or cannot share these identifiers.

Although they have shortcomings, unit record systems are valuable for accountability reporting and performance funding initiatives. The level of information available about students and the states' postsecondary systems is substantially greater than it was 20 years ago. These systems have been a large part of the foundation for comparative peer data, and the state averages that are now in wide circulation can address critical policy questions about student migration and progress within a given state. The largest shortcoming of these systems, however, is their isolation; the systems for K-12 students and postsecondary students are rarely linked together. The value of a K-16 system can only be analyzed when data are available across all components of that system. Enabling states to verify that their investments in education have, in fact, been fruitful will require that very cross-system linkage.

The ability to analyze what a student has learned in high school and what he or she is attempting to learn in college is a promising development in the evolution of unit record data systems

Promising State Practices

While states are in different stages of implementing their various systems, linking together information from different sources becomes the next major step for many state-level data systems. Some data are already being shared even without direct links. Some of the postsecondary unit record systems contain admissions information, including a student's high school and final secondary school grade-point average. Student work undertaken prior to admission to a particular school, in the form of transfer credits or prior college-level work, is also available in certain systems. Extracting this information has permitted many states to develop feedback systems that allow high schools to receive information about their graduates' postsecondary performances. Communication and data sharing of this sort enable greater cooperation among school districts and state colleges and universities regarding academic preparation and expected high school coursework. Though limited in scope, the value of these partnership efforts should not be minimized. Such data sharing can have a direct impact on the decisions being made in a K-16 system. The ability to analyze what a student has learned in high school and what he or she is attempting to learn in college is a promising development in the evolution of unit record data systems.

Even more value will come from the direct and formal coordination of data systems, though it will be challenging to achieve this task on a broad scale. Viewing student data as a valuable resource regardless of student level will require substantial cooperation between multiple agencies and state-level education organizations. Jonathan Tafel and Nancy Eberhart (1999), writing in "Stateside School-College (K-16) Partnerships to Improve Student Performance," very aptly note that a state's ability to collect quality

data and conduct appropriate analysis is necessary for an effective K-16 education system. Robust student databases are required to monitor student progress across the K-16 continuum, enable early assessment for remediation, assess possible intervention activities, and locate barriers within systems.

Many of the issues that were previously addressed through separate systems will now need to be addressed cooperatively. Common definitions and data collection methodologies, issues of privacy and confidentiality, and ownership and control of the data will all need attention. These challenges are great, but the return will also be substantial. Good data and information across all sectors and levels of education will provide a state with a system-wide perspective on its K-16 efforts.

Several states have programs in place that demonstrate the power of partnerships. Maryland has an alliance of the Maryland State Department of Education, the Maryland Higher Education Commission, and the University System of Maryland. This collaboration, known as the Maryland Partnership for Teaching and Learning PreK-16, has identified core learning goals and academic content standards designed to help students transition from high school to college and the workplace.[6] The K-16 partners have worked together to make sure high school exit requirements are better aligned with college admissions requirements. In particular, the Partnership has programs designed to encourage students to consider and prepare for college, and works at both the K-12 and college levels to improve teacher quality. The Partnership is supported by a Leadership Council consisting of corporate, civic, and public and private education leaders who provide advice and support an agenda to improve student achievement. To facilitate the direction of the Leadership Council, a PreK-16 Workgroup comprised of members of the constituencies meets regularly to share information, seek solutions to articulation issues, and collaborate on promising practices that improve student success. Their strategies for achieving these goals include:

- Engaging higher education faculty with PreK-12 teachers in designing assessments of core learning goals for high school graduation, aligned with college admission;
- Engaging faculty across 2-and 4-year institutions in developing clear and consistent expectations for undergraduate education; and
- Extending the current capacity to share and use the data on student achievement, from preschool through college.

Maryland's Partnership is recognized nationally for its voluntary, inclusive organizational structure. It was one of the first states to establish a PreK-16 partnership, and it remains one of the more active partnerships in the entire nation.

Florida is nationally recognized for its K-20 education data warehouse that addresses many of the identified issues.[7] This database pulls together resources from existing systems, including a robust P-12 data system that has been in place for more than ten years, data from the well-established community college and university systems, and financial aid data. It provides a single repository of data on students in the K-20 public education

system as well as educational facilities, curriculum and staff involved in instructional activities. Student data are available on demographics, enrollments, courses, test scores, financial aid, and employment.

Florida is in the relatively unique situation of having a single agency, the Florida Department of Education, overseeing all public education activity in the state. This obviously makes data sharing much more feasible, and the data warehouse allows the Department to analyze information from several sectors. The Department has ambitious goals for their warehouse: to gather complete, timely, and accurate data; to obtain a statewide view; to develop an integrated technical environment that incorporates data from multiple sources and organizations; to merge historical data with current data in a structured repository; to create comprehensive data definitions; and to provide easy access and manipulation. The warehouse is a repository that integrates existing, restructured data, provides state-of-the-art analytical capabilities, and – not least – respects confidentiality. Its mission statement is clear: “The mission of the Florida K-20 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.”

Many of the issues that were previously addressed through separate systems will now need to be addressed cooperatively.

The Texas PK-16 Public Education Information Resource (TPEIR) is a project designed to provide stakeholders in public education – including, but not limited to, administrators, educators, state leadership, researchers, and professional organizations – with ready access to public primary, secondary, and higher education information for purposes of research, planning, policy, and decision-making.[8] The project is a cross-agency effort building on the data and expertise of the Texas Higher Education Coordinating Board (THECB), the Texas Education Agency (TEA) and the State Board for Educator Certification (SBEC). The system includes an integrated interagency data store containing "raw" data currently collected through several different operational systems and stored in multiple distinct databases. Data in the TPEIR data store are a combination of aggregated and raw data. Several specific objectives of the project include:

- Enhancing the analysis and reporting capabilities of both agency staff and external stakeholders;
- Supporting trend analysis with some data from as early as 1989;
- Providing access to consistent results (everyone gets the same answers); and
- Reducing the agency time needed to fulfill requests for data.

Data for the Texas repository come from the three partner agencies. The data most readily linked are data on students, staff, and teacher certification. Texas has almost 1,200 school districts and those districts, along with the state's postsecondary institutions, generate massive amounts of data. There are over 700 million records currently loaded in this very large warehouse with the expectation of adding another 300 million records annually. Specific reports provide information about graduates at all levels along with higher education admissions and enrollments. Cross-agency reports detail PK-16 linkages including high school to postsecondary progression and the sources of certified teachers.

Cal-PASS (California Partnership for Achieving Student Success) is a series of data-sharing consortia that collect, analyze and share data on students as they progress from elementary school through college.[9] Cal-PASS started as a regional project in San Diego and Imperial counties. It has expanded to a consortium that includes numerous community colleges, several high school districts, three public universities and two private universities, all in California. Typically, the community college in a particular region serves as the catalyst for new data-sharing agreements.

Effective data systems have a shared goal of informing stakeholders of the condition of education, thereby helping states identify effective educational practices and diagnose problems at various levels.

The system enables data sharing between K-12 schools, community colleges and universities. The core data include student demographic and transition information, course enrollment data including student grades, and an award file with achievement data. Consortium members receive access to a password-protected site with information on the progress and performance of students within their specific consortium as well as aggregate information across all consortia.

The goal is to help educators understand performance and transitions, improve instruction, and increase student success by addressing questions such as:

- How do our students do when they move on?
- Were they well prepared? Are changes in curriculum necessary to help others?
- How many got degrees at the next level? How long did it take?

Potential uses of the data include program review, cohort tracking, and identifying successful course-taking patterns. Information on student cohorts is provided to cross-sector, discipline-based faculty to examine curricula and instructional practices. Recommendations for improvement are provided to the appropriate agency with a goal of developing more seamless curriculum and improved instructional strategies.

Conclusion

Good decisions require good data. Regardless of design or format, effective systems have a shared goal of informing stakeholders of the condition of education, thereby helping states identify effective educational practices and diagnose problems at various levels. The data and data systems that exist in current K-16 systems attempt, with varying results, to support the decisions made by educators and policymakers that affect current and future students. There certainly are lessons to be learned from each state, but it would be a mistake to think there is a single model or "magic fix" that will work in every situation. Regardless of the strategy employed, a supportive state environment is critical to any successful effort and each environment has its own unique challenges.

State systems were originally designed to count or verify student enrollments and periodically to produce demographic profiles; they are now moving steadily beyond those basic tasks. Data systems of the future will be required to do more: they must provide a comprehensive foundation for documenting the achievement of all students, schools, and colleges. Coordinated efforts will be required to address the challenges inherent in each individual system, as well as those that result from working across systems. As the purposes of information continue to evolve, exemplary data and accountability systems will become more efficient. They will be designed and implemented in ways that increase the ability of policymakers and practitioners to focus on data that are useful for decision-making – within a particular level of the system, and ultimately, across the entire spectrum of K-16 education.

Endnotes

[1] An earlier version of this chapter, published in 2003, was co-written by Hans P. L'Orange and Richard A. Voorhees.

[2] www.sheeo.org/account/comm-home.htm

[3] www.ed.gov/about/bdscomm/list/hiedfuture/reports/final-report.pdf

[4] www.dataqualitycampaign.org

[5] www.dataqualitycampaign.org/survey_results

[6] www.marylandpublicschools.org/MSDE/divisions/leadership/programs/K-16partnership

[7] http://edwapp.doe.state.fl.us/doe

[8] http://texaseducationinfo.org

[9] www.calpass.org

References

Callan, P.M., Finney, J.E., Kirst, M.W., Usdan, M.D., and A. Venezia. 2006. *Claiming Common Ground: State Policymaking for Improving College Readiness and Success*. San Jose, CA: The National Center for Public Policy and Higher Education.

Data Quality Campaign. 2006. *Measuring What Matters: Creating a Longitudinal Data System to Improve Student Achievement*. Washington, DC: Data Quality Campaign.

Ewell, P.T. and M. Boeke. 2007. *Critical Connections: Linking States' Unit Record Systems to Track Student Progress*. Indianapolis, IN: The Lumina Foundation.

L'Orange, H.P. and P.T. Ewell. 2007. *P-16 Data Systems: An Alignment Status Report*. Washington, DC: Data Quality Campaign.

Ruppert, S.S. 1998. *Focus on the Customer: A New Approach to State-Level Accountability Reporting and Processes for Higher Education*. Denver, CO: State Higher Education Executive Officers.

State Higher Education Executive Officers. 2005. *Accountability for Better Results: A National Imperative for Higher Education*. Boulder, CO: State Higher Education Executive Officers.

Tafel, J., and N. Eberhart. 1998. *Statewide School-College (K-16) Partnerships to Improve Student Performance*. Denver, CO: State Higher Education Executive Officers

U.S. Department of Education. 2006. *A Test of Leadership: Charting the Future of U.S. Higher Education*. Washington, DC: U.S. Department of Education.

State Higher Education Executive Officers
3035 Center Green Drive, Suite 100, Boulder, Colorado, 80301
(303) 541-1600
www.sheeo.org