

REVVING THE EDUCATION ENGINE

Effectively Aligning Education, Workforce and Economic Development Policy

Bruce Vandal, Director Postsecondary Education and Workforce Development

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Education Commission
of the States



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For more information about this topic, please contact Bruce Vandal, Director, ECS Postsecondary Education and Workforce Development Institute, at bvandal@ecs.org.

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ECS is the only nationwide, nonpartisan interstate compact devoted to education at all levels. Our core purpose is to enlighten, equip and engage key education leaders — governors, legislators, chief state school officers, higher education officials, business leaders and others — to improve education across the 50 states and U.S. territories.



Introduction

As the national unemployment rate exceeds 10% and state postsecondary institutions report significant enrollment increases, it is clear that many are looking to the U.S. education system to provide the education and training they will need to find livable-wage jobs.¹ Unfortunately, many students looking for a clear and short pathway through postsecondary education to a new job find a system that is hard to navigate, where transitions from one level of education to the next are complicated and often result in students wasting valuable time and resources that don't lead to a postsecondary credential.

President Obama's ambitious goal for the United States to have the highest postsecondary attainment rate in the world by 2020 — and his clear belief that improving the education levels of citizens will result in economic opportunities for them and economic growth for the nation — means that it is important to explore how to leverage public investments in education to support state and regional economic and workforce goals.

The Education Commission of the States (ECS), with support from the KnowledgeWorks Foundation (Cincinnati, Ohio), dedicated 2009 to engaging state education, business and workforce development leaders in the creation of a framework for how states can more effectively align education, economic development and workforce development policy. ECS devoted meetings of its Steering Committee and its National Forum on Education Policy in 2009 to the topic. In addition, ECS engaged other leaders across the nation through two online polilogues or “jams” facilitated by Knowledge in the Public Interest (KPI) to identify promising practices and model policies that enable students to effectively complete postsecondary training and enter the workforce.

Making the Case for Alignment

In remarks made in July, 2009 at Macomb Community College in Michigan, President Obama made it clear that the economic well-being of the United States is inextricably linked with the education attainment level of Americans.² It was in this context that he reiterated his goal for America that, “by 2020, this nation will once again have the highest proportion of college graduates in the world.”³

Data on potential earnings by education level back up President Obama's contention that higher college attainment rates will result in greater economic prosperity for Americans. Census data reveal that increases in potential earnings for those who complete some postsecondary education over those who only have a high school diploma or equivalent range from \$9,000 for an associate degree to \$20,000 for a bachelor's degree.⁴

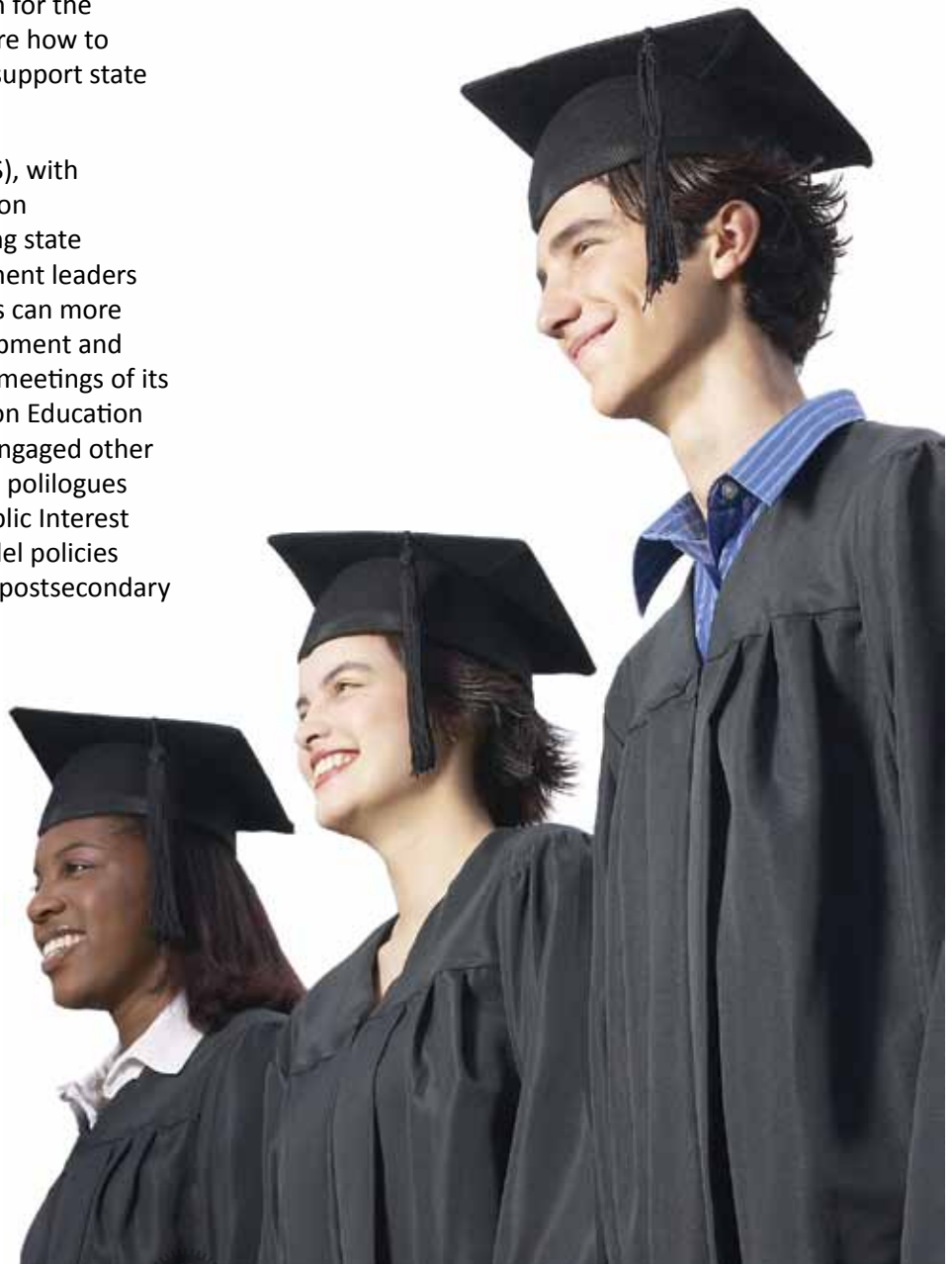
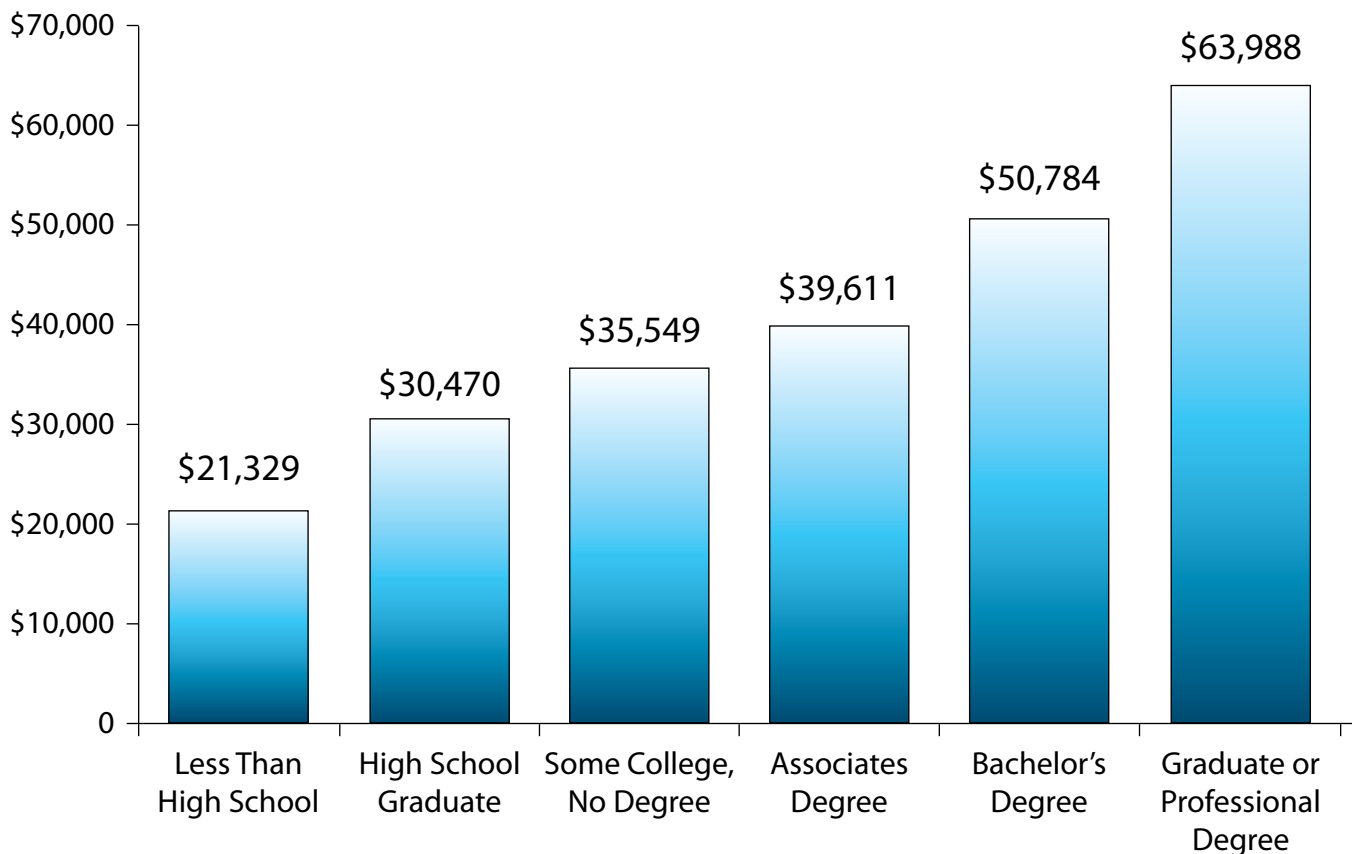


Figure 1: Median Earnings for Population Age 25-64 by Education Attainment, 2006



Source: U.S. Census Bureau, 2006 American Community Survey PUMS File.

While the benefits of improved college attainment rates are clear, the challenges to achieving President Obama's goal are profound. Declining public funding for postsecondary education stands as a significant barrier to higher attainment rates. As states face shortfalls, higher education, with its ability to generate revenue through tuition and other sources, will be an easy target for state legislators. As a result, institutions will need to fully leverage every federal, state, private and tuition dollar at their disposal.

If increasing the productivity of postsecondary institutions will need to be the primary strategy for increasing college attainment — at least in the short term — states will need to consider profound changes for the United States to have any chance of reclaiming its crown as the most highly educated nation in the world.

According to Dennis Jones, president, National Center for Higher Education Management Systems (NCHEMS), the United States will need to increase postsecondary degree production by almost 53% annually — which equates to

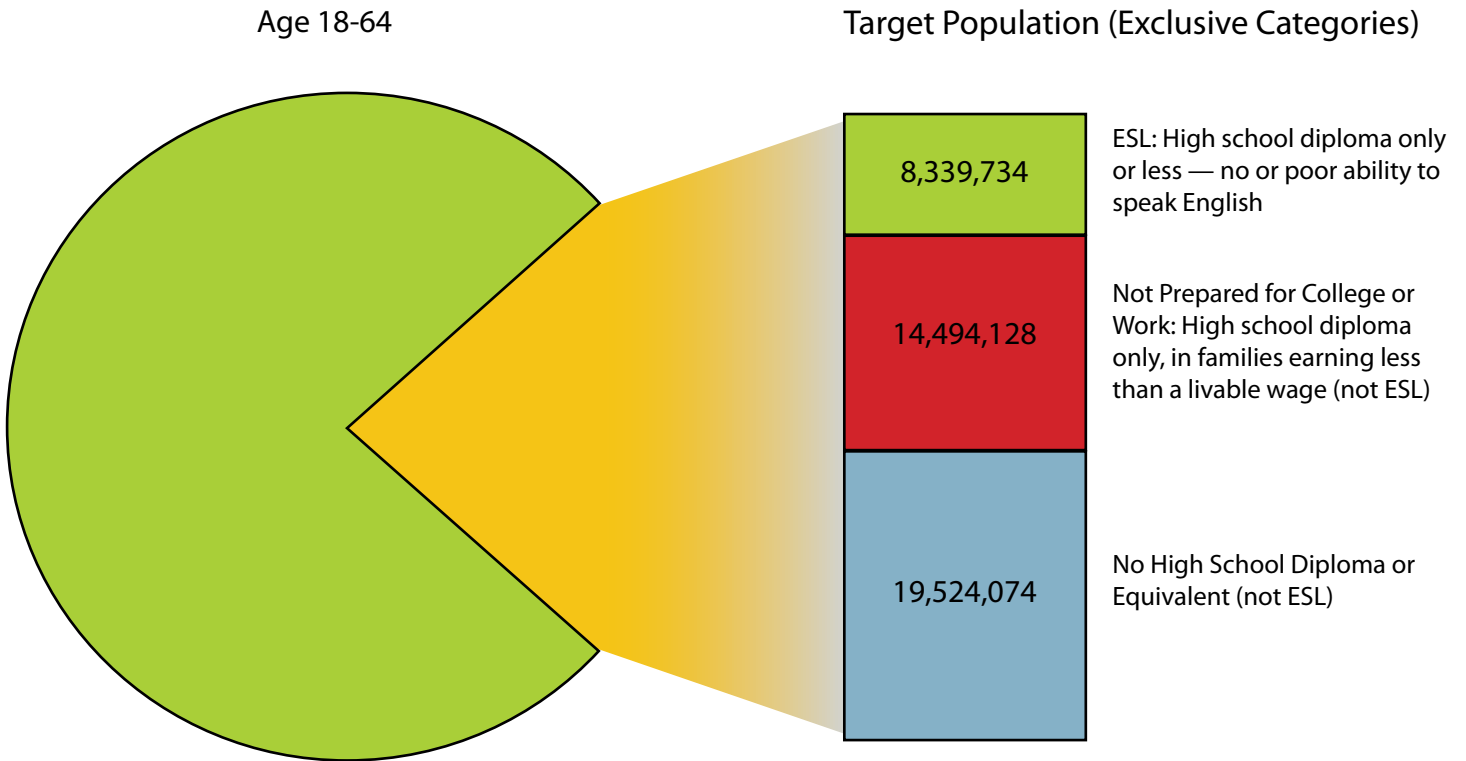
781,000 additional degrees per year — to be number one in the world by 2025.⁵ According to Dr. Jones, 32 states will need to reach beyond traditional high school graduates to increase their college attainment rates to the levels required to be number one in the world.⁶

To reach these projections, states must develop strategies that meet the unique needs of all potential students, including adults.

Adult students who do not possess a postsecondary credential are a large and diverse population. As of 2005, there were over 138 million adults age 18-64 in the United States. Of those, 42 million are candidates for postsecondary education, but are not adequately prepared. Many adults require English language training, others with high school diplomas require remedial and developmental education and others need to acquire their GEDs before being able to enroll. Each of these populations requires a unique set of interventions that will enable them to earn a credential and be employed in a livable-wage job.⁷



Figure 2: Target Population of Adults Age 18-64 for Postsecondary Education, 2005



Note: Incarcerated population not separated out.

Source: U.S. Census Bureau, 2005 ACS; PUMS.

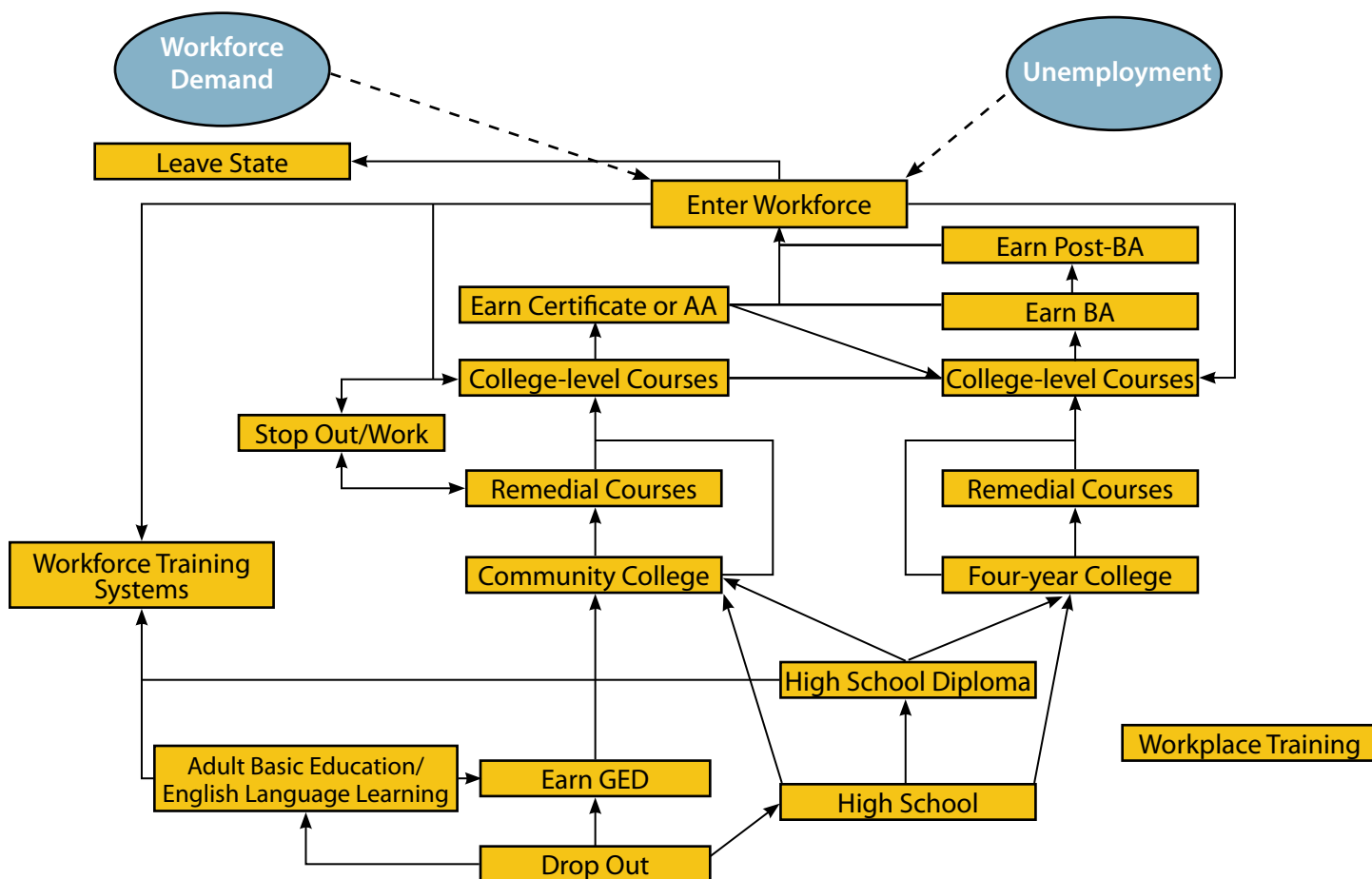
Graph developed by NCHEMS.

While there are isolated efforts to move adults through postsecondary education and into the workforce, many still find a complicated system that is difficult to navigate, not appropriately aligned and not properly focused on student success. Efforts such as Achieving the Dream (Lumina Foundation for Education), Shifting Gears Initiative (The Joyce Foundation) and the Bridges to Opportunity project (Ford Foundation) have resulted in promising policy and innovation for serving the target population. Unfortunately, these efforts have not yet resulted in the comprehensive changes in state policy and institutional practice that is necessary for generating significantly larger numbers of adults with a college credential.

Figure 3 (following page) illustrates the various pathways students must navigate to earn a postsecondary credential and obtain a livable-wage job. For those adult students who make up the target population, the path to postsecondary success is a maze of adult basic education, English language learning, workforce training opportunities, remedial education, and degree or certificate programs that likely will take more time and resources than many have at their disposal. As a result, many will “stop out” of the system to take a low-income job, and many will never return.



Figure 3: Pathways from Postsecondary Livable-Wage Jobs



The complicated nature of the system stands as the primary barrier to the achievement of President Obama’s goal. While greater alignment of the various pathways to a postsecondary credential is needed, many of the following bureaucratic and programmatic hurdles stand in the way:

- ◆ Lack of alignment of federal programs — such as the Workforce Investment Act, Carl D. Perkins Program and Adult Basic Education — with postsecondary education creates a piecemeal set of interventions for students rather than a coherent pathway for those who require basic or specific workforce skills and seek a credential.⁸
- ◆ Turf issues, partisanship and competition for limited resources among the various agencies and political bodies responsible for the policies and programs that train adult students stand in the way of greater collaboration, coordination and alignment.⁹
- ◆ Static bureaucracies focused on compliance rather than outcomes prevent the development of creative solutions.¹⁰
- ◆ Lack of buy-in and productive relationships among key leaders create inertia that makes timely and substantive collaboration difficult, particularly when creative reallocation of resources is the only feasible means to alignment.¹¹
- ◆ The absence of aligned and standardized data systems makes it extremely difficult to track student progress through the system and, more importantly, ensure that the various agencies are able to generate a clear picture of the students they serve.¹²



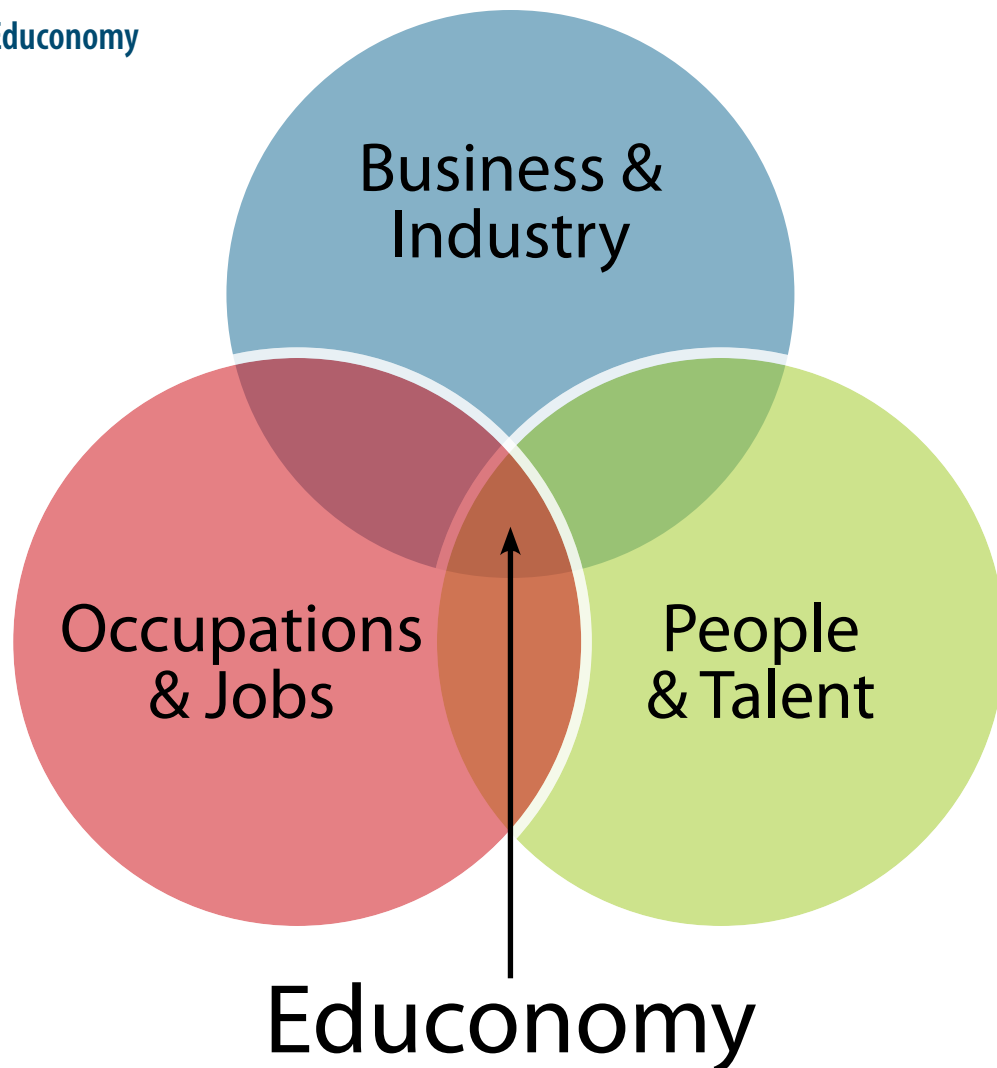
What Do We Mean by Alignment?

Depending on to whom you talk, you might get a very different vision of education, economic development and workforce development alignment. The vision you hear likely is not wrong, but may not be complete. Because the need to increase college attainment rates is so urgent and the challenge so daunting, it is important to take a comprehensive look at a definition of alignment that includes all Americans from traditional high school students to the worker who needs new training after spending decades in the workforce. For the purpose of developing a more comprehensive framework, we contend that four elements are critical to alignment.

1. Alignment Integrates Education, Workforce Development and Economic Development Policy

In many states, education, economic development and workforce development policy largely function separate from one another. As separate sets of policy, they often conflict and, consequently, do not maximize their impact on the overall economic health of a state or region. Tim Alford, Teresa Chasteen and Katherine DeRosear of Worldwide Interactive Network, Inc. (WIN) argue that states should align these three policy areas into a single strategy they term the “Educonomy.”¹³ According to WIN, understanding a region’s educonomy requires “identifying business and industry talent needs, understanding the current and emerging occupational and job-specific skills that are in demand, and take an inventory of the quantity and quality of people willing and able to seek employment in critical occupations.”¹⁴

Figure 4: WIN’s Educonomy



Worldwide Interactive Network, 2008¹⁵



2. Alignment is Regional

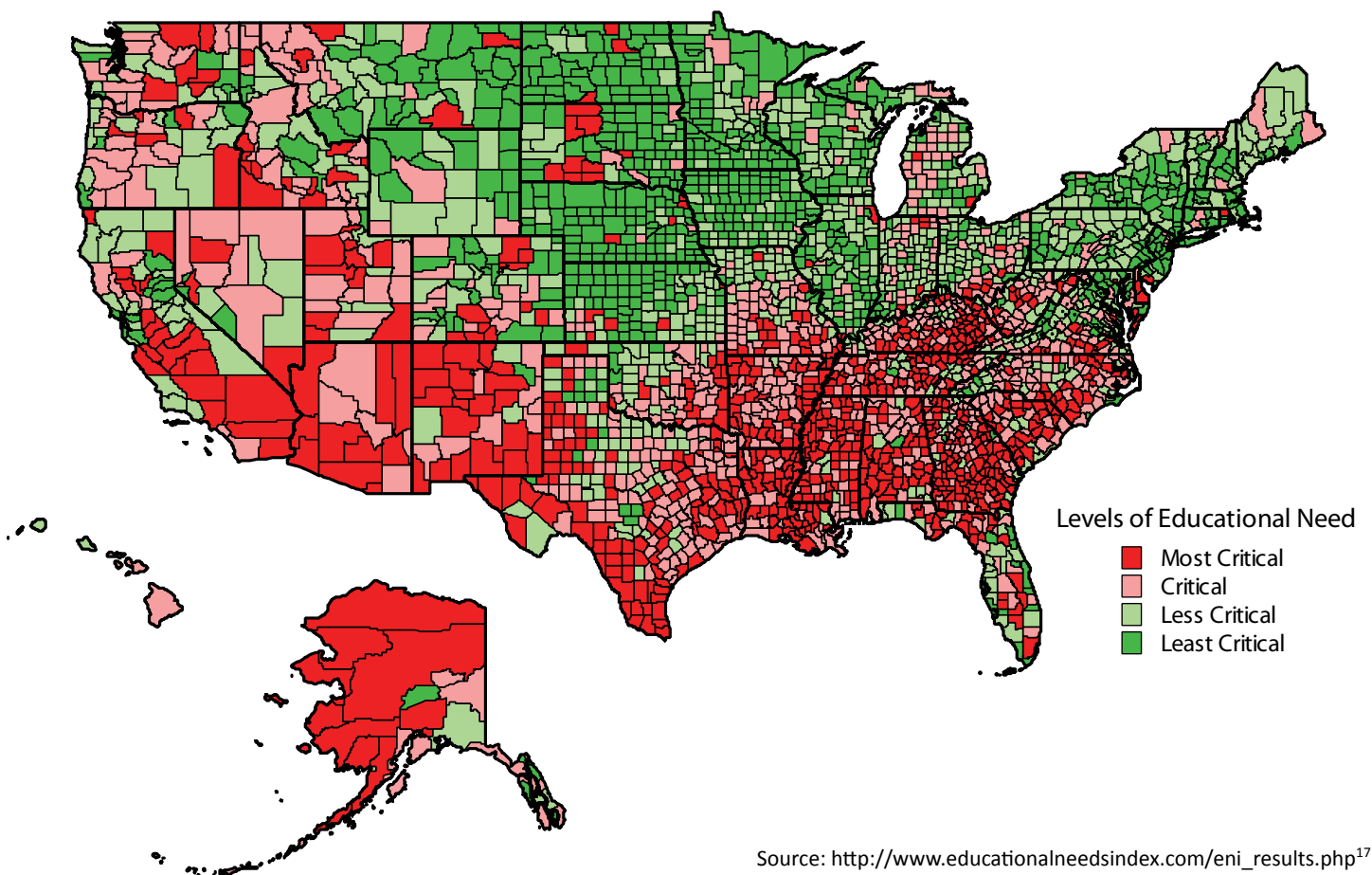
While the challenges regarding the current state of the U.S. economy are posed in national terms, the harsh realities of the current economic downturn are felt unevenly from state to state and region to region. As a result, alignment requires an intimate knowledge of the unique circumstances of various regions that in many cases are not confined to state borders.

The *Educational Needs Index* is a tool — developed by Patrick Kelly from the National Center for Higher Education Management Systems, Brian Noland of the West Virginia Higher Education Policy Commission and Houston Davis of the Oklahoma Board of Regents — to combine data on the educational attainment rate, economic conditions and demographics of residents down to the community level.¹⁶ Their analysis presents a powerful visual that connects our national challenge to the need for regional solutions.

The map from the Educational Needs Index (Figure 5) shows that in many regions of the nation the combination of low educational attainment rates and poor economic conditions are at a critical level.

While the circumstances that contribute to a critical level in the Educational Needs Index vary, one distinct possibility is that a region may be ineffective at developing and retaining an educated population. The result is a vicious cycle that is difficult to overcome. According to Paul Benneworth and Peter Arbo, who studied higher education's role in regional economic development for the Organisation of Economic Co-operation and Development (OECD), high need communities that do not engage education and business to create strategies that integrate education with the workforce, probably will not generate and retain a highly educated population capable of driving economic growth.¹⁸

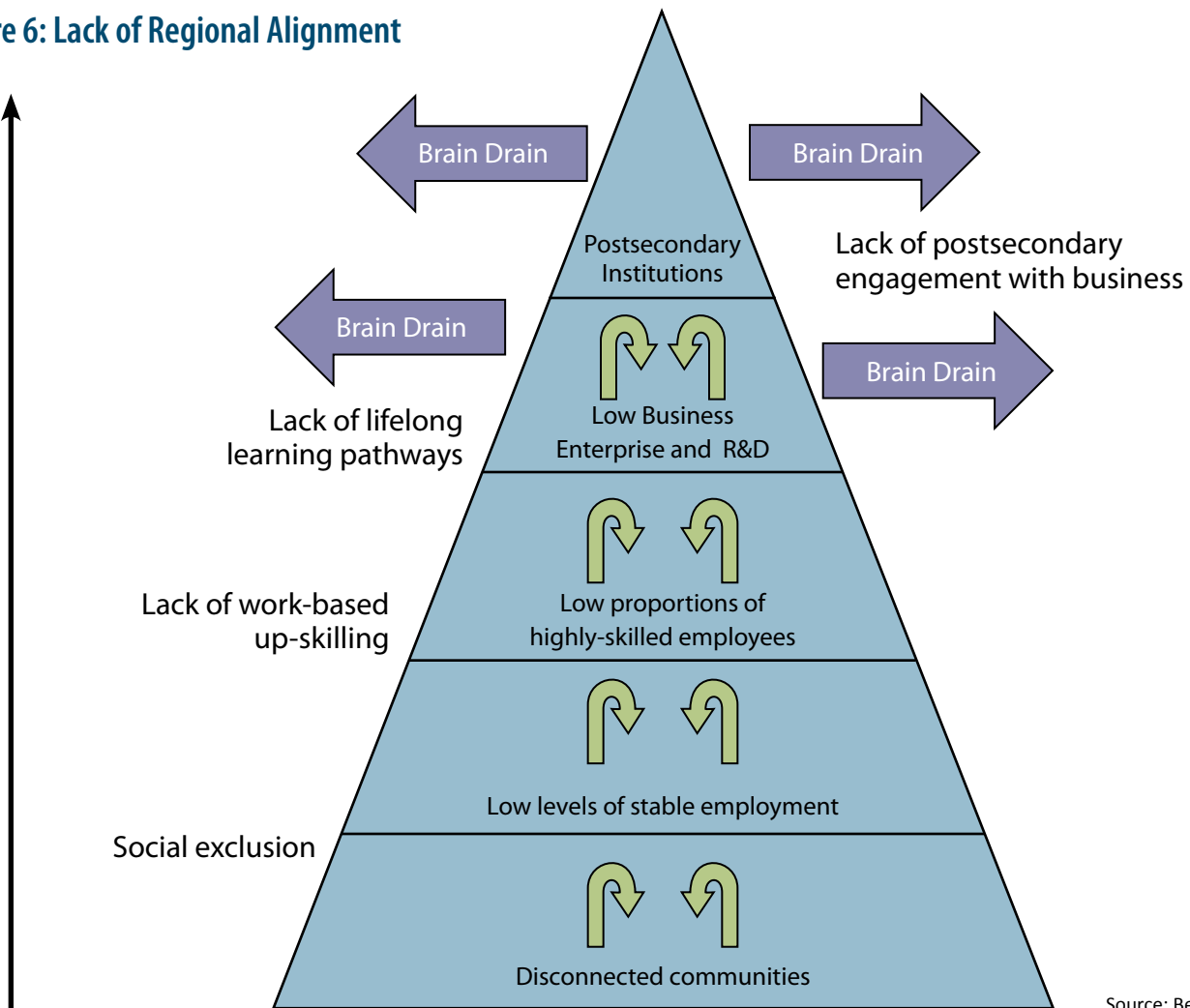
Figure 5: Educational Needs Index for U.S. Counties



Source: http://www.educationalneedsindex.com/eni_results.php¹⁷



Figure 6: Lack of Regional Alignment



Source: Benneworth, 2006

Because of the unique circumstances of different regions, state policy should not apply a broad stroke to alignment and instead should develop policy that is regionally sensitive. For those communities with the greatest needs, state policy should empower those regions to develop more aligned strategies that build off their regional strengths and address their weaknesses.

3. Alignment Positions Education as the Arbiter of Student Supply and Workforce Demand

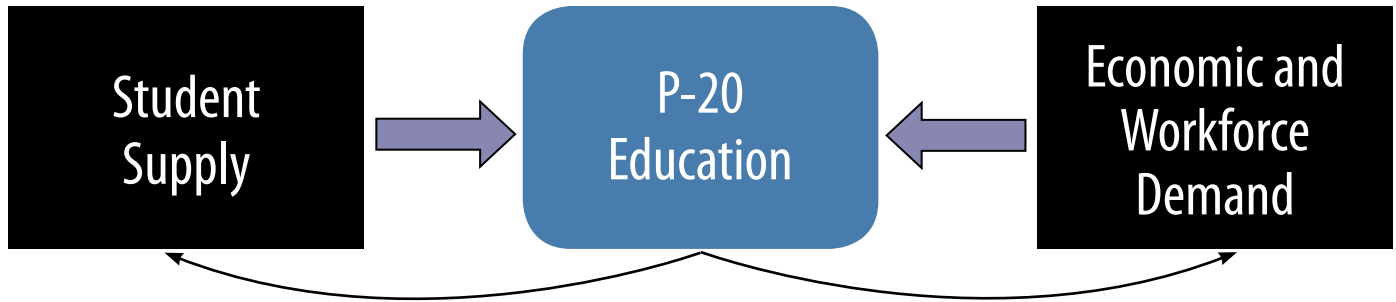
In an aligned system, education institutions are viewed as the arbiter of student supply and workforce demand. In other words, education institutions develop and implement strategies that meet both the needs of a diverse population and the needs of business to fill the highly skilled, livable-wage jobs that are available in a rapidly changing 21st century economy.

To sustain effective alignment, institutions need to be fully aware of the jobs and skills that are in high demand in their regional economy. They need to compare data on these high-demand jobs and skills with the degrees, programs and curriculum offered at their institutions. In addition, education institutions must work with economic development and business leaders to evaluate the effectiveness of their programs and engage them in the development of needed programs.

As a supplier of workers, postsecondary education institutions must understand the academic and career goals of students and customize instruction to allow students to achieve those goals in a timely, cost-effective manner. In addition, they must engage K-12 education institutions, adult basic education programs, one-stop centers and other workforce training systems in developing the mechanisms necessary to guarantee a smooth transition from these programs into postsecondary education.



Assessing Student Supply and Economic/Workforce Demand

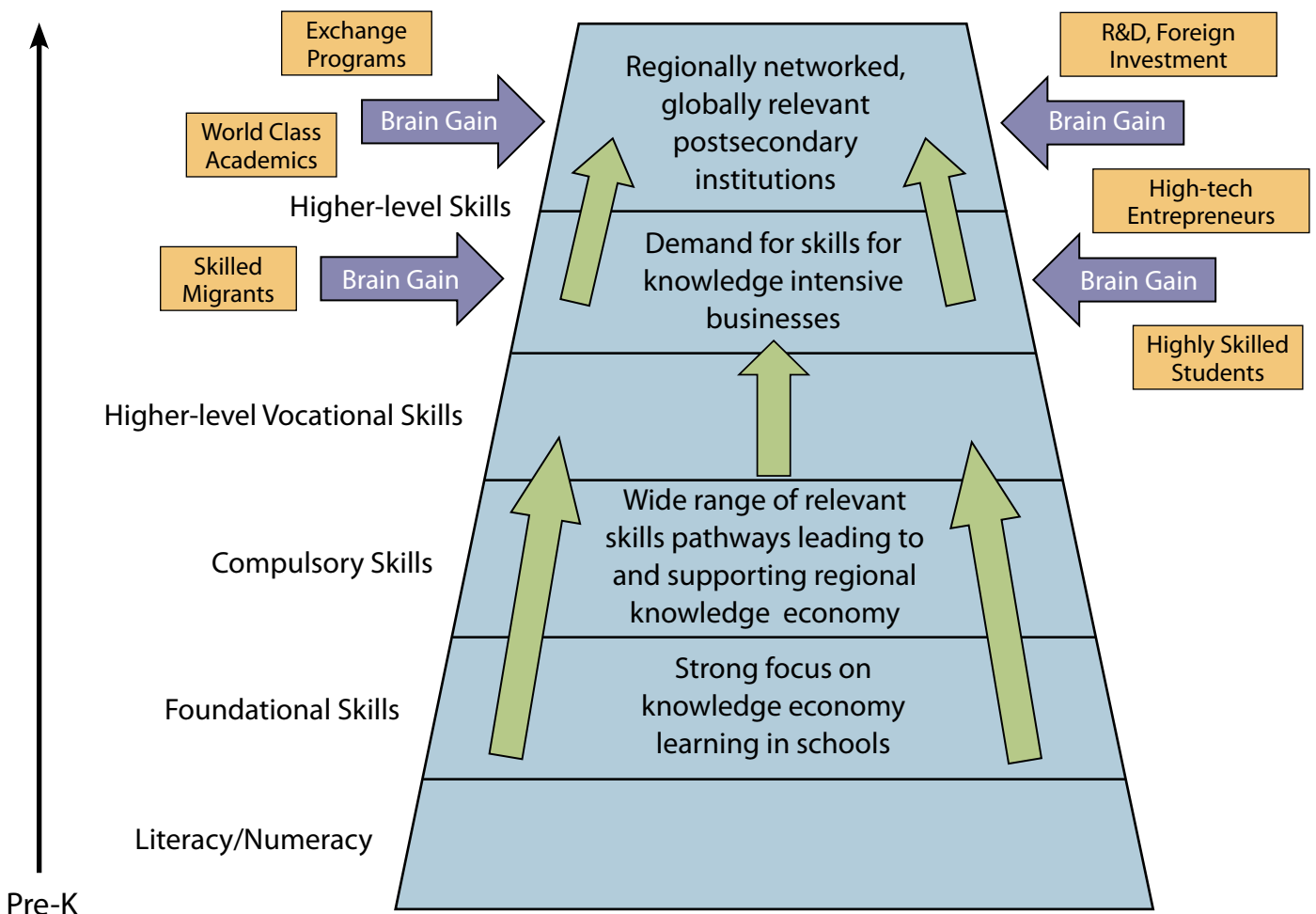


4. Alignment Requires a P-20 Approach

Addressing the profound challenges faced by communities in critical education and economic distress requires wholesale reforms beginning with basic literacy skills in preschool and progressing to the higher-level vocational and academic skills in postsecondary education. Education institutions should be engaged with business and economic

development leaders to develop interventions and policies all along the P-20 pipeline that will result in higher academic achievement and better preparation for the workforce. As Benneworth's model of an aligned system illustrates (Figure 7), a strong P-20 system that is connected to the critical needs of industry creates a growth cycle that leverages investment, attracts high-tech entrepreneurs and results in brain gain to the region.

Figure 7: An Aligned P-20, Economic Development and Workforce Development System



Source: Benneworth, 2006



Key Strategies for Alignment

While states are employing a myriad of programs and policies to meet the economic needs of their regions, three strategies are critical.

Strategy 1: Identify, Assess and Certify the Skills and Competencies in Demand in the Workforce

Employers often express concern that recent graduates lack basic skills, workforce skills and the subject area content knowledge required to be successful. While 48 states now have signed onto the Common Core State Standards Initiative, a critical next step will be to identify the skills and competencies within each standard that are most in demand in regional economies. Moving from broad academic standards to specific skills requires a collaborative process between educators and employers, more diverse assessment instruments that measure student competencies and a re-examination of the ways student learning is certified so that it better reflects the actual skills students possess.

Several states are exploring how to more effectively identify, assess and certify student competencies across the P-20 spectrum. The following are some promising examples.

Identify Student Competencies

The Wisconsin Department of Public Instruction, the Wisconsin PK-16 Leadership Council and Competitive Wisconsin, Inc. engaged business and community leaders in 2007 to explore how to better leverage the state's education investments toward economic development goals. Attendees were asked to identify the skills current 8th graders will need when they graduate from high school and college to be successful in the workplace.¹⁹ Using the *Partnership for 21st Century Skills Framework*, participants identified the skills they felt were most important for students to learn along the preschool through postsecondary education pipeline.^{20,21} The findings from the summit contributed to a standards review process conducted in partnership with the American Diploma Project and the Partnership for 21st Century Skills. The goal of the process was to ensure state standards were appropriately relevant to the skills required for the workforce. The Wisconsin Department of Public Instruction released proposed standards in high school English and mathematics in 2009 and intends to align those standards with the *Common Core State Standards Initiative* once the process for adoption is released.^{22,23}



Assess Student Competencies

The Illinois State Board of Education's *Prairie State Achievement Examination (PSAE)* for 11th graders uses a combination of the ACT and the reading and mathematics section of the WorkKeys® assessment. Results from the WorkKeys component of the PSAE for all Illinois high schools are made available online through a partnership between *School Data 4 All* and the Illinois Business Roundtable.²⁴

In 1998, the **Utah Board of Regents Task Force on General Education** asked “*What is an Educated Person?*”²⁵ The results were a set of education goals that outlined the skills all Utah postsecondary education institutions should teach as part of their general education curriculum. The Task Force generated overall goals for writing, quantitative literacy, physical sciences, life sciences, social sciences, humanities, fine arts and American institutions. The process outlined learning goals by aligning the general education curriculum with business and industry needs, incorporating the latest research on student success and engaging in a process of “*Academic Tuning*” much like the Bologna Process in Europe.²⁶ The Task Force took on the daunting task of outlining measurable learning outcomes for students in four broad areas: Knowledge of Human Cultures and the Physical and Natural World, Intellectual and Practical Skills, Personal and Social Responsibility, and Integrative Learning.²⁷

To measure student learning outcomes, Utah institutions will develop e-portfolios that enable institutions to document student skills and competencies. The e-portfolio will supplement the diploma by serving as a type of educational résumé that will prove useful to students as they enter the workforce.



Certify Student Competencies

Many states, regions and industries are beginning to use work readiness certificates as a means of certifying the skills students have acquired through K-12, postsecondary or other training programs.

Virginia is one of 37 states using *ACT's Career Readiness Certificate (CRC)*.²⁸ The CRC is a portable skills credential that certifies basic workplace skills in applied mathematics, reading for information and locating information as assessed by ACT's WorkKeys.²⁹ In 2004, through the urging of Virginia business leaders, Governor Mark Warner implemented the CRC in the state's community colleges. The CRC certifies skills and competencies as measured by a legally compliant skills assessment that can be used in the hiring process. The CRC allowed the further development of the *Virginia Skills Bank (VSB)* by the Virginia Community College System and the Virginia Electronic Technology Center.³⁰ The VSB is a database where employers can search by individual or by WorkKeys scores, geography or types of certifications to identify candidates for job openings.³¹ The CRC was developed to complement traditional postsecondary credentials by enabling students to document work-ready skills as well as the academic skills their degree certifies. In addition, the CRC creates a common ground that facilitates greater cooperation between education and business.



Strategy 2: Align Education and Workforce Data Systems

Momentum for developing data systems that link education productivity and workforce demand is growing. While many states might conduct periodic assessments in specific fields such as healthcare and technology, few states have developed comprehensive data systems that track the extent to which postsecondary education meets the state's workforce needs.

Effective data systems can be used to conduct large-scale analyses of postsecondary productivity and workforce trends as well as to provide specific information for workers looking to pursue education and training in high-demand fields. The following examples showcase some of the best practices that are emerging in states.

The Ohio Skills Bank (OSB) is the University System of Ohio's effort to realign education and workforce systems to the skills and jobs that are in high demand within regional economies.³² OSB is essentially a career-pathways process comparing regionally distilled Bureau of Labor Statistics data and other regionally validated employer data on occupational demand against the program completion data from the region's postsecondary institutions. If workforce shortages are projected in a given area, OSB works with employers to develop strategic and tactical approaches to meeting demand in as timely a manner as possible.³³ OSB provides the opportunity to more effectively deploy proven strategies such as career pathways to create career ladders that encourage the region's workers to pursue high-demand occupations.³⁴

The Department of Commerce in South Carolina is utilizing WIN's *Strategic Compass*[®] to align education and economic development efforts. Strategic Compass employs a user-friendly dashboard to bring together typically disparate data that facilitates just-in-time economic analyses, strategic planning and resource allocation.³⁵ The tool enables the user to track the latest data on industry trends and demand in various occupations. The system also enables the user to identify the education and training programs that can provide the training needed in any given occupational field — plus monitor whether the productivity of education and training programs are meeting or exceeding state, regional or national demand. The dashboard is available to workforce development agencies, school districts, postsecondary institutions and guidance counselors who advise residents about their education and training options.³⁶

Strategy 3: Develop Customized Instructional Models

The final strategy to effectively align education and workforce is implementation of a delivery model that meets the unique needs of a diverse student population while providing appropriately contextualized instruction capable of efficiently and effectively moving students through training and into livable-wage jobs. The following are some of the most promising instructional models.

Arkansas is one of several states employing a career pathways approach that aligns various levels of education and training to specific occupations within industries such as healthcare or manufacturing. Under *the Arkansas Career Pathways Initiative (CPI)*, two-year institutions provide education and training in high-demand fields to low-income, low-skilled Arkansas residents.³⁷ The strategy coordinates public postsecondary education, state social services, economic development and workforce development programs into a cohesive strategy that reaches residents who have the most difficult time accessing education and training.³⁸

The program, funded through the state's Division of Workforce Services via the U.S. Department of Human Services' Temporary Assistance for Needy Families (TANF)³⁹, serves students who are "TANF-eligible".⁴⁰

The program is coordinated by the Arkansas Department of Higher Education with involvement from the Arkansas Department of Workforce Education, the Department of Workforce Services, the Department of Human Services, the Arkansas Association of Two-Year Colleges and the Southern Good Faith Fund.

The legislative mandate establishing the program includes funding incentives for reaching performance measures such as increased numbers of students who pursue or complete a degree or certificate or who gain and retain employment. The project, currently approaching its fifth year, is showing promising results. In the 2007-08 progress report, enrollments exceeded performance goals, degree and certificate completion rates fell just short of the goal of 50%, and over seven of 10 sites had employment rates that exceeded the state standard of 55%.⁴¹

The Washington State Board of Community and Technical College System's (SBCTC) *Integrated Basic Education and Skills Training program (I-BEST)* is recognized widely as one of the most successful education and workforce alignment initiatives in the nation.⁴² I-BEST resulted from Washington's involvement in the Lumina Foundation for Education's *Achieving the Dream Initiative (ATD)*.⁴³ As part of ATD, SBCTC conducted a study examining the



educational experiences, attainment rates, employment rates and earnings of adults five years after first enrolling at an SBCTC institution. The research found that short-term training, participation in adult basic education or enrollment in a limited number of college-level courses did not lead to increased employment rates or earnings. Only those students who reached the “tipping point” of enrolling for at least one year at a community or technical school and/or completed a degree or certificate saw a measurable increase in wages.⁴⁴

As a result of the tipping point research, the system set a goal for all students to enroll in college-level work for at least a year and ultimately earn a degree or certificate. Because many students who enroll in the system are not academically prepared to enroll in college-level courses, SBCTC needed to devise strategies to move students through basic skills education more quickly. The solution was the I-BEST program. I-BEST pairs English language learning and adult basic education instructors with professional technical instructors in courses for the purpose of providing basic skills training in tandem with college-level technical training.⁴⁵ The courses teach basic skills within the context of the technical course in which they are enrolled, so students can immediately apply their learning to their field. A detailed study of the project found that I-BEST students achieved at a higher level than other basic skills students. I-BEST students were more likely to continue into credit-bearing courses, earn credits toward a credential, earn a certificate and improve their basic skills.⁴⁶

Moving From Strategies to System Realignment

Each of the examples cited are impressive in their efforts to more effectively align education strategies with the economic and workforce needs of their states and regions. While these innovations show great promise, implementing them in isolation will not necessarily result in a systemic realignment of education, economic and workforce policy and resources. With the U.S. economy undergoing a seismic shift, states must develop an entirely new infrastructure to withstand the inevitable tremors that go along with a competitive global economy. In a time of limited public resources, education institutions must position themselves as a critical player in targeted, data-driven, human capital development that directly contributes to regional and state economies.

Fundamental realignment of the education system with local and regional economies requires a comprehensive and sustained effort that: engages key leaders; overcomes turf issues; moves static bureaucracies from compliance to innovation; effectively uses data that enables just-in-time responses; and creatively reallocates federal, state and local resources. Successfully navigating hurdles and institutionalizing a systemwide response is complicated and often times overwhelming. Fortunately, with new federal and private resources available to jumpstart efforts, the time is ripe for states to commit themselves to alignment.



The *KnowledgeWorks Foundation* serves as a model for how the philanthropic community can play a key role in alignment.⁴⁷ KnowledgeWorks is Ohio's largest education philanthropic organization and has positioned itself as a primary catalyst for greater education and economic development alignment. The foundation engaged in a multi-pronged strategy of attracting investment from large national and regional foundations like the Ford Foundation and Joyce Foundation to develop and implement career pathways models across the state of Ohio. The Foundation then parlayed the success of those efforts into a comprehensive statewide strategy by gaining the support and investment of the state's education and government leaders. The lessons learned from Ohio and the other states that have engaged in alignment efforts offer insights from which other states about to engage in alignment work can learn.

The Education Commission of the States, with the support of the KnowledgeWorks Foundation, engaged in two online polilogues or "jams" with education, workforce and economic development leaders. According to Knowledge in the Public Interest (KPI), the jam facilitators, "A jam is a facilitated asynchronous online discussion during which participants share experiences, ideas and materials. The discussion is analyzed and made available to participants." Jams are an effective way to engage a large number of people in meaningful online dialogue. Because a jam is a text-based forum, the dialogue can be easily analyzed using qualitative text analysis techniques. In addition, it is effective at identifying a wide variety of online resources participants can access.

Eighty-seven leaders participated in one or both of the following online jams. The participants included legislators, governors' staff, higher education and K-12 leaders, workforce development and economic development representatives, and business leaders.

Partnerships for Alignment: Education, Workforce and Economic Development, October 22-23, 2008

This jam included three concurrent threads that addressed:

- ◆ Making the Case for Alignment: What's the Return on Investment?
- ◆ Creating Powerful Partnerships: Connecting People, Perceptions and Policy
- ◆ Building an Effective and Sustainable Strategy.

Leveraging P-16 Councils to Drive Education and Economic Success, March 19-20, 2009

The jam included three threads that took place consecutively and addressed:

- ◆ Aligning P-16 Councils with Workforce Goals
- ◆ P-16 Council Roles in State Data Systems
- ◆ Creating Effective P-16 Councils.

Knowledge in the Public Interest drafted an analysis of both jams that provides valuable insights on how states can develop a more comprehensive change strategy for creating a statewide approach to greater alignment of education, workforce and economic development policy. The following represent some key recommendations.

Create a Virtuous Circle of Policy and Practice

Jam participants shared a variety of approaches to jump-starting alignment efforts. Some efforts began as a result of powerful leadership from governors and other high-profile leaders that percolated throughout agencies and systems. Other efforts gained steam from local or regional strategies that achieved promising results. In either case, there seemed to be a dynamic of good policy promoting good practice and good practice leading to innovative policy. Creating a virtuous circle where success builds on success throughout the system seemed to lead to stronger and more systematic alignment. Following are some examples of how states are creating a virtuous circle of policy and practice.

See the Forest and the Trees

In **Colorado**, Governor Bill Ritter has worked to align state policy and regional strategies promoting economic development. He recruited key stakeholders, clarified the roles they should play, and brokered opportunities for policy to inform practice and vice versa. He has accomplished this by creating separate and distinct charges for the Colorado State P-16 council and the Governor's Jobs Cabinet. Before every legislative session, the P-16 council is tasked with developing a set of policy recommendations. The Governor is clear about the council not getting into the minute details of funding or implementation. He simply is looking for policy innovation. With the Jobs Cabinet, he has focused on specific strategies that address immediate and pressing needs. He asks them not to get engaged in policy discussions, but on real solutions. As a result, he has enlisted the involvement of key state leaders to deliberate over both policy innovation and practical solutions, creating an opportunity for Governor Ritter to ensure that policy and practice reinforce one another.



Move from Planning to a Strategic Plan

In **Ohio**, the long-term decline of the manufacturing sector and the precipitous loss of jobs that resulted was no secret to policy and education leaders. What was not well understood was the capacity of the state's institutions to respond to the economic challenges the state was facing. A series of commissions and planning committees met and issued reports on the lack of alignment in Ohio's education and workforce systems.⁴⁸ Two planning processes began to build momentum for greater alignment. The development of a career pathways initiative in 2005 and the work of the Ohio Workforce Education and Training Council, created by Governor Taft by executive order in 2006, led to a very practical vision for how greater alignment could benefit the Ohio economy.^{49, 50}

A conference of community college leaders in 2004 began the work of developing a career pathways initiative that would position community colleges as important actors in regional workforce development efforts. The lessons learned from the initiative made a very persuasive case for a coordinated, statewide effort to achieve greater alignment of education and workforce investments.

The report of the Workforce Education and Training Council released in 2007 created additional urgency by assessing the lack of alignment in the current system and recommending some practical policy changes to facilitate greater alignment. The council, which is made up of business, education and workforce leaders, was an appropriate forum for creating a joint sense of urgency among each of these groups. These efforts — along with a new strategic plan from the Ohio Board of Regents — resulted in the oversight of the state's Adult Basic Education and Career-technical education systems being moved under the Ohio Board of Regents. This created a GED-to-PhD pipeline and a synergistic response that made the transition to greater statewide alignment possible.

Use One Innovation to Beget Another

Virginia's development of a Virginia Skills Bank, immediately after establishing the Virginia Career Readiness Certificate (CRC), made the CRC more relevant to employers and individuals. As a result, the CRC gained greater currency and broader commitment to alignment efforts.⁵¹

The **Ohio** Board of Regents Strategic Plan intentionally links economic development and education goals by harnessing existing innovations and steering them in a single direction. Strategies such as moving adult

basic education under the Board of Regents, the Career Pathways work led by KnowledgeWorks, the Ohio Skills Bank and stackable certificates for teaching basic skills have been in motion for some time. The Strategic Plan provides a vision and a mechanism for measuring the contribution these initiatives have made toward statewide goals.

Washington's I-BEST is part of a larger State Board of Community and Technical College (SBCTC) strategy to improve degree and certificate completion rates. The I-BEST program benefited from a change in the funding formula for SBCTC courses so they could cover the additional cost of multiple instructors in courses. In addition, the Washington legislature adopted a new incentive funding program for SBCTC institutions that rewards institutions for meeting a variety of benchmarks related to the system's broader attainment goals. The Washington model demonstrates how effective application of research can lead to broader investment in education and workforce alignment efforts.



Support Regional Solutions

Alignment needs to have a regional dimension. While problems can be described in state terms, the realities are felt by regions. The challenges in a region made up of small rural communities are very different than an urban region that relies on a strong manufacturing base to succeed. The jams revealed examples where state investments supported regional solutions. Conversely, there were examples where the best thing state government did was stay out of the way and allow innovation to take place. Following are examples of how regional leaders can contribute to achieving both state and regional goals.

Empower Regions

Oklahoma has taken a regional approach to the implementation of the state's Career Readiness Certificate (CRC) strategy by naming *Certified Work Ready Communities* that are committed to engaging all the key stakeholders within a region to implement a CRC strategy.⁵² Collaboration at the state level among all of the key agencies allowed for the successful implementation of Work Ready Communities. Prior to such collaboration, the lack of clear communication across agencies contributed to a divide-and-conquer strategy that pitted representatives from those agencies against one another at the regional level. The successful collaboration at the state level has led to the development of a broader mission for the high-level managers who made up the initial partnership for the Work Ready Community Initiative. As a result, Oklahoma is poised to develop a more comprehensive alignment strategy.⁵³

Ohio's movement to an incentive-based funding formula for its postsecondary institutions empowers the state's institutions to achieve the goals of the strategic plan. Because some of the performance measures are regional in nature, institutions must work together to achieve them.⁵⁴ In addition, the performance measures are related to the specific goals of the strategic plan. The various "challenge" programs in the new funding formula address: economic growth, postsecondary access, jobs, research and student success.⁵⁵

In addition, the Ohio Skills Bank gathers data on postsecondary productivity and workforce demand for each of the state's 12 regions. This data has become the foundation for a regionally based, but system-wide realignment of education and workforce efforts. The data produced by the Ohio Skills Bank has been the lifeblood of innovative efforts connecting postsecondary institutions with industry and workforce leaders in their regions.

Exercise Regional Power

The **Ohio** Regional P-16 Councils are not named in state policy and typically are informal organizations not burdened with the running of programs. Without specific charges from the state, regional councils are able to creatively convene the key players and align resources. While the lack of a formal role makes communication difficult, the regional councils don't see this as a barrier to impacting policy.

In **Georgia**, regional P-16 councils have played a proactive role in communicating policy priorities to the state. While there is some effort to connect regional councils to the larger state P-16 council run out of the Georgia Board of Regents, regional councils are not shy about using their own political influence to make direct appeals to the legislature for policy change. It is not uncommon for regional P-16 councils in Georgia to engage their local state legislators — who might even be on the regional council — to push for policy at the state level. The key to their success is that the councils are learning to use data to effectively make their case. Such data reveals regional differences, which builds support for regional solutions.

In **Kentucky**, regional P-16 councils often convene school district leaders and other regional leaders to discuss key policy issues and communicate the findings to state leaders in an attempt to impact state policy. The regional nature of these summits provides critical feedback to states on whether state policy supports regional solutions.

Leadership, Engagement and Sustainability

While leadership plays a critical role in catalyzing alignment work, it may be even more important to the sustainability of efforts and the continued engagement of all the key players. Governors and other state government leaders are very important, but the nature of election cycles means that governors and other elected officials will come and go. As a result, others need to step up to the plate to provide the leadership necessary to sustain efforts across elected administrations.

One action a governor can take is to issue an executive order to study the state's workforce issues and immediately bring attention and focus to the issue. The order presents the opportunity to bring together business, education and policy leaders in an effort to build a coalition committed to greater alignment. The following are some examples of how strong leadership can propel alignment efforts.



Break Down Barriers Through the Use of Common Data

In **Florida**, Governor Bob Graham was concerned that the state's education, workforce development and economic development efforts were not "singing out of the same hymnal." In fact, the various agencies, armed with their own set of data, were often in conflict with one another. Graham ordered a large study to explore how state investments could be aligned to meet economic development goals. The study engaged business leaders, students, employers and the broader public to explore how system resources could be better leveraged. The results of the study had an immediate impact to include the immediate integration of data systems.⁵⁶ By creating common data, agencies are able to work together to develop solutions that cross agency lines.

Broaden Leadership. It's Not Just for Governors.

In **South Carolina**, *New Carolina*, a sector-based group of business leaders, in partnership with the South Carolina Department of Commerce, worked together to generate policy changes that initiated greater alignment of education, economic development and workforce goals.⁵⁷ Through New Carolina, business leaders identified the core industries in the state and developed a regional/sector-based strategy to create greater alignment in state economic development efforts. New Carolina incorporated education into the strategy by working with the Department of Commerce to push through a major education reform called the *Education and Economic Development Act (EEDA)*.⁵⁸ EEDA has resulted in opportunities for regional collaboration among education and workforce leaders through the development of regional education councils as well as statewide reform of K-12 curriculum to ensure its relevance to the workforce.

In **Ohio**, the KnowledgeWorks Foundation provided leadership by working closely with all of the key policy, education and workforce leaders in support of a statewide strategy. KnowledgeWorks worked with Governor Taft to lay the groundwork for a statewide strategy, but then continued the work with Governor Strickland in a manner that has led to a sustainable strategic direction for the state. The foundation's ability to leverage outside resources and work closely with all stakeholders contributed to greater commitment from the Governor's Office and the Office of the Chancellor from the Ohio Board of Regents. While there are several groups working together on alignment, KnowledgeWorks has been the common thread tying the efforts together into a statewide solution.⁵⁹

Converging Regional Efforts

According to Dennis McGrath, the goal of a regional approach is a "convergence" through which local education, economic development, business, policy and workforce leaders can develop a unified vision for regional development, align resources, use data to set priorities and bring effective initiatives to scale.⁶⁰ It was clear from the jam that there is a desire in states to "lay it all on the table" to better align resources. The following are examples of how key stakeholders worked together to "converge" state and regional efforts.

STRIVE Together, a regional P-16 council in southern Ohio and Northern Kentucky, is conducting an inventory of the federal, state, local and philanthropic resources to see if they can be better aligned to meet regional goals. In addition, STRIVE is identifying both government and philanthropic resources that have not been fully tapped sufficiently to meet regional goals. Central to these efforts is a unified understanding of the pipeline that students follow to a degree, the research on the key barriers and outcomes that facilitate student success, and recognition of the linkage between education success for students and the economic success of the region.

While the funding is almost exclusively through the Temporary Assistance to Needy Families (TANF) block grants, the **Arkansas Career Pathways Initiative** is run by the Department of Higher Education and involves all of the key government agencies that are engaged in the education and economic success of the state's most low-wage, low-skilled workers. Building a system where the agencies are invested in the strategy and do their best to align their efforts with the initiative demonstrates convergence around a set of goals and outcomes.



Deliberately Connect Postsecondary Success to Economic Success

Developing a strategic plan that inextricably links education outcomes with economic outcomes can be a valuable tool for creating alignment. The following are examples of strategic plans that tie the success of the education system with the economic conditions of states.

Kentucky's Public Agenda for Postsecondary and Adult Education is widely considered a model for how to create greater alignment between education and the economy.⁶¹ “The Five Questions” developed for the strategic plan make explicit the state’s commitment and the strategies it should pursue for increasing college attainment rates, meeting the workforce needs of residents and benefiting the state’s economy. The state’s response to each question is spelled out with action strategies, clear goals, benchmarks of progress and implementation plans from every institution in the state. The plan has led to significant policy changes to include the reorganization of the entire postsecondary system, shifting adult education to postsecondary education and propelling greater articulation of college readiness standards.

The Ohio Board of Regents' Strategic Plan for Higher Education, much like Kentucky’s public agenda, sets out clear objectives that are tied to the overall economic well-being of the state.⁶² Graduating more students, keeping those graduates in state and attracting degree holders to the state are all tied to a broader economic vision for postsecondary education. In addition to the clear objectives for the University System of Ohio, the document lays out a set of clear principles for how institutions will achieve the plan’s objectives. Statements such as: “the state will offer many educational options ... the University System of Ohio will end the counter-productive competition among institutions for scarce resources ... and programs at adult workforce centers that are equivalent to technical programs offered at community colleges will be accepted for college credit, creating clear pathways between these types of institutions” make it very clear what types of policies and strategies that the system will pursue to meet the goals of the plan.⁶³ The commitment of the Board and the Chancellor, as well as the Governor, suggests the plan will be a blueprint for a coordinated, systemwide strategy, rather than merely a list of proposals to various legislative and governing bodies.



Conclusions

Creating statewide alignment of education, economic development and workforce development is different from state to state. Some states have a myriad of specific programs in place, but collectively they don't add up to a statewide strategy. Other states have a vision for greater alignment but are having a difficult time moving forward with policy and programmatic reform.

Because states find themselves at various stages of alignment, we offer some critical strategies that states could (and should) employ to move the needle on alignment.

Strategies to Facilitate Statewide Education, Economic and Workforce Alignment

Identify a Neutral Intermediary

Because the nature of these efforts requires collaboration across state agencies, housing alignment efforts in any given agency might not be the best way to go. Governors can use their positional authority to provide leadership and to catalyze a process, but there might need to be an independent agent like a foundation, policy think tank or business/industry partnership that keeps the ball rolling by convening leaders, collecting information and accessing resources from public or private grants. The facilitator needs to have the respect of all the key players and access to the Governor and other state leaders to move the conversation to the action stage.

Engage Business with a Substantive Role

Critical to moving alignment forward is involving the business community very early in the process. Business brings a unique view of the problem as well as its own language and strategies for moving ideas to action. Early involvement will ensure that business interests and their ways of working are incorporated into the strategy. Asking business to come later in the process runs the risk of not fully engaging them in the work of alignment.

Think Globally, Act Regionally

While the ultimate goal is to develop a statewide alignment strategy, the overall success of the strategy will depend on whether it meets the unique needs of each region in the state. As a result, developing policies and strategies that allow for a regional response is very important. Policies that incentivize regional collaborations of business, education, workforce and economic development leaders will ensure that the statewide strategy meets the needs of all corners of the state. Likewise, do not discourage regions from crossing state lines to develop solutions. In many cases, regions have more in common with the communities right across state borders than the state in which a region resides.

Inventory Current Efforts

Whether it is through federal programs like the Workforce Investment Act, community college-based customized training contracts with local employers or strategies like a career pathway model, every state is engaged in some level of alignment work. Conducting an inventory of existing strategies will acknowledge the current investment in alignment, identify promising strategies that can be built on and identify significant gaps that should be addressed. In addition, recognizing current efforts allows the leadership to invite those involved in smaller scale alignment efforts to be at the table as the conversation moves to a statewide strategy. This approach ensures less “stepping on toes” or “reinventing the wheel.”

Do a Data Integration

Bring together institutional research staff from workforce, human service and education to share and combine data. While most states cannot link databases across all these systems, states can take a snapshot of the current system and more importantly test or confirm the assumptions each agency has about the state.

The data should be both statewide and regional. Data should include demographic, economic and education. The Educational Needs Index can provide an initial snapshot. Also consider current workforce demand by industry and skills, postsecondary productivity by degree and any available data on workforce readiness using WorkKeys or another work readiness assessment.



Conduct a Policy Audit

Examine current state and postsecondary system policies to see how they either facilitate or impede alignment. Are there policies that prevent the sharing of data, unnecessarily segment education and training efforts into disjointed programs with disparate goals, or prevent innovation at the postsecondary institution level?

Assess the Capacity and Charge of Current Commissions and Councils

Closely examine the roles of P-16 councils, workforce investment boards, governors' workforce councils, and other boards and commissions that either support state agencies or convene stakeholders across the institutional spectrum. What are their missions? Do they duplicate efforts? Are there efforts at cross purposes? Once you have assessed current capacity, make recommendations for changes that create greater alignment.

Engage and Convene

At a point where interest in alignment appears to be peaking, begin to build broader investment through one-on-one meetings and larger meetings. While not all data must be in place to make the case for alignment, it is important to convey the need in a meaningful and substantive way. Presenting data in a manner that crosses institutional boundaries and provides an alternative view of the problem may be important to catalyze a substantive conversation. Buy-in is more likely if you bring something new to the table.

Use New Resources to Leverage Existing Resources

The American Recovery and Reinvestment Act, the American Graduation Initiative and grants from foundations provide a unique opportunity to implement innovative strategies and catalyze system reforms. Those resources, however, must be focused ultimately on redeploying existing resources and, more importantly, greater productivity. New resources can help purchase the equipment, pilot innovations and evaluate results so you can make the case for broader systemic reform with existing or quite possibly fewer resources.

Concentrate in particular on TANF, Workforce Investment Act, Perkins, Adult Basic Education and other federal programs that have unique missions by focusing them on statewide goals.

Get the Commitment of the Governor(s)

To develop a statewide strategy, you ultimately need the support of the governor and, in the case of turnover, governors. Building on the efforts of one governor with the new governor can be very difficult, but with the buy-in and engagement of all the key players, it can be done. The neutral intermediary can play a critical role in sustaining efforts across administrations and changes in leadership.

Engage the Legislature and the Board of Regents

While the buy-in of the governor is important, the state postsecondary system or the state legislature can stand in the way of a state response if it does not meet their goals or interests. A regional approach can help bring legislators on board by acknowledging the unique needs of their region and articulating how alignment can benefit their district. The same can be true with postsecondary systems, particularly when it comes to recognizing the work already being done on campuses to benefit the surrounding community. Getting the support of individual institutions can result in broader support at the system level.

Build on Successful Strategies and Challenge Ineffective Strategies

If there is an institution, program or policy that seems to be achieving an impressive result, use its success as a jumping-off point for the larger discussion. Use the lessons learned, the data collected and outcomes achieved to raise the question about how to scale up and institutionalize this innovation. Likewise, if there are efforts that seek to achieve greater alignment, but have been unsuccessful, don't hesitate to illustrate what needs to change.

Goal: Strategic Vision and Systemic Change

Successful programs should lead to a more systemic approach. Aligning data systems, adjusting funding formulas, creating greater accountability, developing incentives, institutionalizing successful reforms and eliminating restrictive regulation are all strategies that can be employed. In the end, those policies should all point in the same direction toward a broad vision for alignment and measurable goals all state agencies can stand behind.



Endnotes

- 1 U.S. Bureau of Labor Statistics, Labor Statistics from the Current Population Survey, <http://www.bls.gov>, (accessed December 1, 2009).
- 2 President Barack Obama, *Excerpts of the President's Remarks in Warren, Michigan today and a fact sheet on the American Graduation Initiative* (Washington D.C.: Office of the Press Secretary, The White House, July 14, 2009).
- 3 Ibid.
- 4 Dennis Jones, *Linking Education with Economic and Workforce Development* (Minneapolis : Education Commission of the States Steering Committee Meeting, , April 22, 2009).
- 5 Ibid.
- 6 Ibid.
- 7 Ibid.
- 8 Knowledge in the Public Interest, *From Partnerships For Alignment: Education, Workforce and Economic Development Jam* (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest, October 22-23, 2008).
- 9 Ibid.
- 10 Ibid.
- 11 Ibid.
- 12 Ibid.
- 13 Tim Alford, Teresa Chasteen and Katherine DeRosear, *It's the Educonomy, Stupid!: The Intersection of Education and the Economy* (Kingston: Worldwide Interactive Network, 2008).
- 14 Ibid.
- 15 Ibid.
- 16 Educational Needs Index, <http://www.educationalneedsindex.com>, (accessed September 14, 2009).
- 17 Ibid.
- 18 Paul Benneworth and Peter Arbo, *Understanding the Regional Contribution of Higher Education Institutions: A Literature Review* (Paris: OECD Institutional Management in Higher Education Programme, 2006), <http://www.staff.ncl.ac.uk/p.s.benneworth/test.htm>, (accessed September 14, 2009).
- 19 S. Paul Sandrock, Wisconsin Department of Public Instruction, *From the Partnerships For Alignment: Education, Workforce and Economic Development Jam* (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest, October 22-23, 2008).
- 20 Partnership for 21st Century Skills, *21st Century Skills Framework* (Tucson: Partnership for 21st Century Skills), http://www.21stcenturyskills.org/index.php?Itemid=120&id=254&option=com_content&task=view, (accessed August 27, 2009).
- 21 Wisconsin Department of Public Instruction, *Business Summit on 21st Century Skills Summit Overview: Preparing Students for Work, Postsecondary Education, and Citizenship* (Madison: Wisconsin PK-16 Leadership Council and Competitive Wisconsin, Inc., July, 2007), http://www.dpi.wi.gov/nwp/pdf/business_summit_brochure.pdf, (accessed August 27, 2009).
- 22 Proposed Revisions to WI Model Academic Standards (Madison: Wisconsin Department of Public Instruction), <http://www.dpi.wi.gov/cal/standards-revisions.html>, (accessed August 27, 2009).
- 23 Common Core State Standards Initiative, <http://www.corestandards.org> (accessed August 27, 2009).
- 24 Illinois Business Roundtable, *SchoolData4All WorkKeys*, http://www.schooldata4all.org/work_keys, (accessed September 29, 2009).
- 25 Utah Regents Task Force on General Education (Salt Lake City: Utah Board of Regents, December, 2009), http://www.utahsbr.edu/regents_taskforce.htm, (accessed September 29, 2009).
- 26 Lumina Foundation for Education. , "FAQs on Bologna and Tuning," (Lumina Foundation for Education) , http://www.luminafoundation.org/our_work/tuning/Q_and_A-Bologna_and_Tuning.html, (accessed September 29, 2009).



- 27 Teddi Safman, Utah Board of Regents, *“Tuning” Academic Disciplines: Process and Progress in Indiana, Minnesota, and Utah* (Denver: State Higher Education Executive Officers Higher Education Policy Conference, August 13, 2009), <http://www.sheeo.org/hepconfsite/hepc2009/hepc2009.htm>, (accessed August 28, 2009).
- 28 Commonwealth of Virginia, Virginia Career Readiness Certificate, <http://www.crc.virginia.gov>, (accessed September 29, 2009).
- 29 Kathryn DeRosear, Worldwide Interactive Network, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest, October 22-23, 2008).
- 30 Commonwealth of Virginia (Richmond: Virginia Skills Bank), <http://www.crc.virginia.gov/skills-bank>, (accessed September 29, 2009).
- 31 Glenn DuBois and Gloria Westerman, *Virginia Career Readiness Certificate*, *Community College Journal of Research and Practice*, Vol. 31, 2007, 535-536.
- 32 University System of Ohio (Columbus: Ohio Skills Bank), <http://uso.edu/opportunities/ohioskillsbank/index.php>, (accessed September 29, 2009).
- 33 Tom Fellrath, Ohio Board of Regents, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest, October 22-23, 2008).
- 34 Ibid.
- 35 South Carolina Department of Commerce, WIN Strategic Compass, <http://www.sccommerce.com/scworkforce/workforcedevelopment/winstrategiccompassreg.aspx>, (accessed September 29, 2009).
- 36 Kathryn DeRosear, Worldwide Interactive Network, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest. October 22-23, 2008).
- 37 Arkansas Department of Higher Education, Arkansas Career Pathways Initiative, <http://www.sccommerce.com/scworkforce/workforcedevelopment/winstrategiccompassreg.aspx>, (accessed September 29, 2009).
- 38 Workforce Strategy Center, *Arkansas Career Pathways Initiative: Progress Report of Activities and Outcomes during Program Year Three (July 1, 2007 – June 30, 2008)*, (New York: Workforce Strategy Center, Prepared for the Arkansas Department of Higher Education, March, 2009).
- 39 Karen Wheeler, Arkansas Department of Higher Education, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest. October 22-23, 2008).
- 40 Ibid., Workforce Strategy Center.
- 41 Ibid., Workforce Strategy Center.
- 42 Washington State Board of Community and Technical Colleges, I-BEST Resources, http://www.sbctc.ctc.edu/college/_e-stdtsuccessibestresources.aspx, (accessed September 29, 2009).
- 43 *Achieving the Dream: Community Colleges Count*, <http://www.achievingthedream.org/default.tp>, (accessed September 29, 2009).
- 44 David Prince and Davis Jenkins, *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Longitudinal Student Tracking Study (The “Tipping Point” Research)*, Research Report No. 06-2 (Olympia: Washington State Board for Community and Technical Colleges, April, 2005).
- 45 Tina Bloomer and David Prince, *I-BEST: A Program Integrating Adult Basic Education and Workforce Training*. Research Report No. 05-2 (Washington State Board for Community and Technical Colleges, December, 2005).
- 46 Davis Jenkins, Matthew Zeidenberg and Gregory Kienzl, *Educational Outcomes of I-BEST Washington State Community and Technical College System’s Integrated Basic Education and Skills Training Program: Findings from a Multivariate Analysis*. CCRC Working Paper No. 16 (New York City: Community College Research Center, Teachers College, Columbia University, May, 2009).
- 47 KnowledgeWorks Foundation, <http://www.kwfdn.org>, (accessed September 29, 2009).
- 48 Roy Church, Lorain County Community College, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest.
- 49 KnowledgeWorks Foundation, *Overview: Career Pathways in Ohio*, March, 2008).
- 50 Ohio Workforce Education and Training Council, *Recommendations for Focusing and Aligning Ohio’s Workforce Education and Training System* (Columbus: Ohio Workforce Education and Training Council, 2007).
- 51 Ibid., DuBois and Westerman.



- 52 Oklahoma Department of Commerce, Oklahoma Certified Work Ready Communities, http://www.okcommerce.gov/index.php?option=com_content&task=view&id=2332&Itemid=871, (accessed September 29, 2009).
- 53 Terry Watson, Oklahoma Board of Regents, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest. October 22-23, 2008).
- 54 Ibid., Fellrath.
- 55 Ohio Board of Regents, *FY 2010-11 Proposed SSI Funding Formula*, http://regents.ohio.gov/financial/selected_budget_detail/1011_budget.php, (accessed August 31, 2009)
- 56 Jay Pfeiffer, Florida Department of Education, From Partnerships For Alignment: Education, Workforce and Economic Development Jam (Denver: Education Commission of the States, facilitated by Knowledge in the Public Interest. October 22-23, 2008).
- 57 New Carolina: South Carolina's Council on Competitiveness, <http://www.newcarolina.org/index.php>, (accessed September 29, 2009).
- 58 South Carolina Department of Education, Education and Economic Development Act, <http://ed.sc.gov/agency/Accountability/Technology-Services/old/dts/EEDAProject.html>, (accessed September 29, 2009).
- 59 Ibid., Church.
- 60 Dennis McGrath, *Convergence as Strategy and as Model: Linking P-16 Education Reform and Education Development* (Cincinnati : KnowledgeWorks Foundation, 2008).
- 61 Kentucky Council on Postsecondary Education, *Five Questions, One Mission: Better Lives for Kentucky's People* (Frankfort: Kentucky Council on Postsecondary Education, September, 2005), http://cpe.ky.gov/NR/rdonlyres/BEC64FFE-7730-4CC9-90B5-17B58EAD7FD3/0/FINAL_Public_Agenda_20051004.pdf, (accessed September 29, 2009).
- 62 Eric B. Fingerhut, *Strategic Plan for Higher Education, 2008-2017* (Columbus: Ohio Board of Regents, 2008), <http://www.uso.edu/strategicplan/downloads/documents/strategicPlan/USOStrategicPlan.pdf>, (accessed September 29, 2009).
- 63 Ibid.