

# Education and Skills for the 21st Century: *An* **AGENDA** *for* **ACTION**



For more than a century, U.S. education and the U.S. economy were envied throughout the world. By the 1960s, three out of four adults had a high school diploma, up from one in twenty in the early 1900s. And for much of the twentieth century, that diploma was the education credential needed to earn a decent living, contribute to the economy, and participate in our democratic society.

For several decades following World War II, the “education pipeline” adapted to new conditions: the United States doubled the numbers of college students every 20 years, or even faster, giving us the highest postsecondary achievement level in the world. Our economy created industries, technologies, and jobs and dominated the global economy. As productivity rose, economic opportunity for a growing middle class followed right along.

Flash forward to 2005. The industrial economy has given way to the knowledge economy, fueling demand for highly skilled workers. Yet our education and skills pipeline is leaking badly and in need of significant repair. Stories in the media and speeches by America’s most prominent business leaders underscore the inextricable link between educational achievement and economic vitality and warn of looming threats.

Toyota has decided to locate its newest manufacturing plant in Canada, not the United States, even though our subsidies were twice as generous. Why? In Canada, says Gerry Fedchun, president of Canada’s Automotive Parts Manufacturers’ Association, “The level of the workforce in general is so high that the training program you need for people, even for people who have not worked in a Toyota plant before, is minimal compared to what you have to go through in the southeastern United States.”

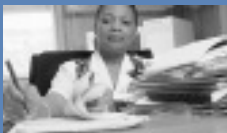
And Microsoft founder Bill Gates has told the nation’s governors that our outmoded education pipeline threatens the nation’s most basic ideals: “The American high school is obsolete.... If we keep the system as it is, millions of children will never get a chance to fulfill their promise because of their zip code, their skin color, or the income of their parents. That is offensive to our values, and it’s an insult to who we are.”



JOB FOR THE FUTURE seeks to accelerate the educational and economic advancement of youth and adults struggling in today’s economy. JFF partners with leaders in education, business, government, and communities around the nation to: strengthen opportunities for youth to succeed in postsecondary learning and high-skill careers; increase opportunities for low-income individuals to move into family-supporting careers; and meet the growing economic demand for knowledgeable and skilled workers.

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## The Challenge: Keeping Pace in a Global Economy

Today, competitiveness comes down to skills and how they are built, maintained, upgraded, and applied.

According to the American Diploma Project, more than two-thirds of new jobs require some postsecondary education, and the fastest-growing, best-paying jobs require the highest levels of education (see box). Moreover, as ADP research indicates, success in college depends upon the same reading, writing, and math skills that lead after high school to earning a family-supporting income. The Partnership for 21st Century Skills, which brings together the business community, education leaders, and policymakers, calls for all high school graduates to have not just strong academic skills but also sophisticated “higher-order” skills, such as the abilities to solve problems and use complex information.

How well does the education pipeline meet such standards? The nation is adapting, but progress is too little and too slow. Inefficiencies and obstacles to smooth transitions to further learn-

ing come at great cost to individuals, businesses, the economy, and society:

- U.S. students drop out of the education pipeline at an alarming rate: for every 10 students who enter eighth grade, only seven graduate high school on time, and only three complete a postsecondary degree by age 26. High school and college graduation rates, which had significantly improved through the 1970s, have since risen only slowly or stagnated.
- Only about half of 2005 high school graduates have adequate college-level skills in reading comprehension, and most lack college-ready skills in math and science, according to a yearly report from ACT, which produces one of the nation’s leading college admissions tests. 2005 scores on ACT tests show virtually no change in college-readiness from the previous year.
- U.S. students seem to fall further behind their peers in other countries the longer they are in school. According to the Council on Competitive-

### The Best-Paying Jobs Are Growing Fastest— But Require the Most Education

Highly-Paid Professional Jobs  
Earning **\$40,000+**  
PROJECTED JOB GROWTH RATE: 20%



Well-Paid, Skilled Jobs  
Earning **\$25,000–\$40,000**  
PROJECTED JOB GROWTH RATE: 12%



Low-Paid or Low-Skilled Jobs  
Earning **less than \$25,000**  
PROJECTED JOB GROWTH RATE: 15%



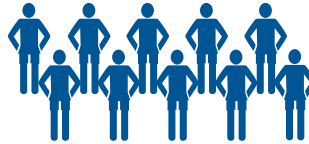
Source: American Diploma Project, [www.achieve.org](http://www.achieve.org)

## The Education Pipeline Is Broken

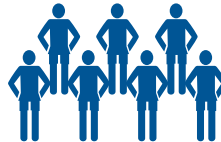


### Gaps in Attainment Are Caused by Failures at Critical Points Along the Education Pipeline

For every **ten** students who enter eighth grade...



Only **seven** will get a high school diploma



**Three** will complete a postsecondary degree by age 26.



ness, U.S. fourth graders do relatively well in math and science, but our twelfth graders rank near the bottom.

- Two out of every five 18- to 64-year-olds lack the basic literacy skills in math and reading to succeed in postsecondary education and the twenty-first century economy. Education programs for these adults serve perhaps 10 percent of the millions in need.

Individuals—in school and in the workforce—must shoulder some of the load when it comes to adapting to the rising demand for skills. For instance, most high school students spend three hours or less a week preparing for classes, according to the National Society for the Study of Education. A recent survey found that 65 percent of high school graduates in college and 77 percent of graduates not in college now wish they had worked harder in high school.

That said, our institutions—and their policies—bear significant responsibility. Higher education is financially out of reach for many people, and our

colleges are far better at enrolling students than they are at graduating them. Far too few companies recognize the long-term competitive benefits of investing in their employees in ways that enable them to upgrade their skills, be more productive, and advance. Community partnerships—among employers, unions, educational institutions, and government

agencies—could expand the local or regional pool of knowledgeable workers, but such collaborations are rare and struggle for stable funding. Local, state, and federal government spending on lifelong learning is woefully inadequate, especially compared to spending on other public priorities.

Our education pipeline is divided into several disconnected, inefficient segments: early education (birth until kindergarten), kindergarten through grade 12, postsecondary education, and adult and lifelong skills training. Because these segments are, at best, poorly aligned with one another, they do little to help individuals make the often difficult transitions within and between them. High school students frequently have no idea what to expect in college, on the job, or in an apprenticeship. Many college students know little about what is possible—or expected—in the workplace. Employees and employers alike are bewildered by the dearth of information about adult learning opportunities at community colleges or elsewhere, let alone how to access or pay for education or training.

### Working for the Whole Nation

The increasingly diverse population of the United States is an asset in the global economy, yet our education system is challenged in its ability to ensure access and success for individuals from harder-to-serve groups:

- In some states, barely half of African-American and Hispanic students earn a high school diploma in the standard number of years. Nationally, only 18 percent of African Americans and 10 percent of Hispanics earn a college credential by age 29, compared to 34 percent for whites.
- One in three new immigrants lacks a high school diploma. Yet immigrants are projected to account for half of the working-age population growth between 2006 and 2015 and all the growth between 2016 and 2035.

Inequity matters. Regardless of race, economic mobility is greatly enhanced by educational opportunity, yet a key determinant of a person's educational progress is the economic status of his or her family:

- Young people whose annual family income is below \$25,000 have less than a 20 percent chance of earning a two-year college degree or higher.
- Over three-fourths of those whose family income exceeds \$75,000 earn a college degree.

## Meeting the Challenge

Our country never stands still, and powerful innovations are taking hold in some communities and states—in schools and postsecondary institutions, among employer and community-based organizations, and by local, state, and federal government agencies. But promising approaches are isolated, and they reach only a fraction of the population. And even as many institutions try their best to meet today’s skills challenges, it is not easy to achieve better outcomes for *all* students and to address the needs of a diverse population for higher skills.

Business as usual—that is, educational and workforce development reforms that tinker at the edges—will not suffice. Instead, we must create an education pipeline that connects and integrates early childhood, K-12, postsecondary, and adult learning. This pipeline will support those who are at risk of dropping out, raise the performance of poor and minority students, and close achievement gaps. It will engage adults in ongoing learning. And it will be flexible enough to serve emerging industries as well as individuals of varying academic and skill levels.

How can we take advantage of today’s best innovations and new models to rebuild and extend the education pipeline for tomorrow’s needs?

Answers—for individuals, the economy, and the nation—will come through two approaches:

- 1 ***Accelerate Achievement and Learning:*** Create and support rigorous, high-performing learning institutions that enable young people and adults to achieve at high levels and advance rapidly to earning postsecondary credentials.
- 2 ***Promote Lifelong Learning:*** Create and finance a workforce preparation system that yields the skilled workforces our businesses and communities need to thrive today and in the future, continuously advancing individual skills to meet the shifting demands of today’s workplaces.

### 1 ACCELERATE ACHIEVEMENT AND LEARNING

Improving the education pipeline to and through postsecondary credentials that the economy values will require changes in practice and policy.

- Ensure that all high school students have the knowledge and skills they need to succeed in college and the workplace by expanding the number of rigorous, high-performing schools.
- Promote rapid advancement based on mastery of content, not seat

### Benchmarks for a High Quality Education Pipeline

- All students graduate high school with high levels of knowledge and skills, prepared to succeed in further learning.
- All young people earn a postsecondary degree or credential by age 26.
- All workers participate in ongoing learning to update their skills and knowledge and meet the shifting demands of the workplace.



## Envisioning the Future: What the 21st Century Education and Skills Pipeline Will Look Like

- An education and skills pipeline that meets the needs of the 21st century economy will be less institution-bound than our current one, with more ways to access education, more competition, and more choice.
- The lines between high school and college will blur, and workplaces will be venues for lifelong learning.
- Neighborhood schools will still provide most education for youth, but they will be part of community-wide systems engaging a variety of education providers, including charter schools, education management organizations, and online learning.
- Education providers for youth and adults will create new relationships—including a mix of public and private partnerships—between and among students, employers, and education institutions.
- “Third-sector” institutions, such as intermediaries in education and workforce development, will help employers find qualified workers and help individuals to obtain jobs and careers that pay enough to support a family.

time, and condense the time needed to earn a postsecondary credential.

- Make the transitions from one segment of the education pipeline to another easier by improving the alignment between K-12 and postsecondary educational institutions and systems and by making workplaces more learning-friendly.
- Provide students with early exposure to and experience in college and workplaces through new partnerships among business and K-12 and postsecondary education.

*Ensure that all high school students have the knowledge and skills they need to succeed in college and the workplace by expanding the number of rigorous, high-performing schools.*

The nation must increase the number of young people, particularly those from low-income and minority families, who enter and complete postsecondary credential programs. To do so will require creating the kinds of supportive environments that enable students, teachers, and schools to per-

form at higher levels. Students need a strong foundation in both math and English, strong learning skills—in information gathering, communication, critical thinking, and problem solving—interpersonal and self-directional skills, and more. A balanced mix of classroom assessments and high-quality standardized tests can help teachers determine when stu-

dents are ready to advance and help teachers and learners target their efforts in part based on customized test results produced with the aid of technology. Well-designed advising and counseling can enable more students to achieve at higher levels.

The conversion of large, underperforming high schools into small schools or small learning communities can promote the strong student-teacher relationships and effective collaborations among staff that enable diverse students to achieve at higher levels in school and in further education and careers. Schools and school districts will require new and clearly defined reform models that offer paths to improving instruction and outcomes for all students. And successes must be expanded to a national scale, a goal that will benefit greatly from the creation and expansion of networks among leading schools and districts.

## Faces of the Future: Secondary-Postsecondary Partnerships

Kimberly entered University Park Campus School in the seventh grade, the oldest of ten children in her family. She overcame tremendous odds to accomplish what she has earned: a place on the Dean’s List at Clark University. Homeless for ten months during her junior year at University Park, Kim, moving from house to house and caring for her brothers and sisters, completed college classes, scored top grades on AP exams, and maintained an A average.

University Park, a grade 7-12 school in Worcester, Massachusetts, was founded and operates through a joint effort of the public schools and Clark. UPCS juniors and seniors attend Clark classes, Clark undergraduates tutor UPCS students, and graduate students complete their year of student teaching or Master’s year at UPCS. Just as important, the university offers free tuition to neighborhood youth like Kim who qualify for admission to Clark, and the partnership gives substance to the goal of college and the standards to perform at the college level.

University Park defies the picture of failing schools and its students break the mold of young people who are “not supposed” to succeed. The school is located in Worcester’s lowest-income neighborhood, and two-thirds of the students come from homes where English is not spoken. When the students in UPCS’s first graduating class entered the school, only 1 percent were reading at grade level. Yet UPCS consistently ranks first among urban schools serving low-income students on state-mandated exams and in the top 10 percent of all high schools in the state. Newsweek has ranked UPCS as the nation’s 68th best high school. Every UPCS graduate is prepared for college, and 80 percent have gone to four-year institutions, including Brown, Georgetown, Trinity, Tufts, and Clark.



Students who begin high school three to six years behind cannot catch up without extra time. Thus, schools that serve the most disadvantaged young people need additional funding, enabling them to extend learning time through after-school and summer programs or by lengthening the school day or year. Fewer students would leave high school, and improved institutional structures in colleges would prepare those who are not college-ready to succeed.

*Promote rapid advancement based on mastery of content, not seat time, and condense the time needed to earn a postsecondary credential.*

Currently, students move to the next class or grade when they complete the required number of hours in a class. As a result, faster learners become bored and disengaged, while others advance without fully learning the subject matter. Still others are ready to advance in certain subjects but must stay behind—and become disengaged—while mastering other areas. In a well-designed education pipeline, advancement would be based on mastery of content. Students who need it

could take extra time in certain subjects but still advance in other subjects in which they excel. Technology can aid in the development of ongoing diagnostic assessments that help schools determine when students are ready to advance and in what subjects.

In fact, many high school students are ready for college-level courses long before earning their diploma. Through dual enrollment and early college high school programs, they can take college-level courses in some subjects while completing high school graduation requirements in others. Ultimately, these programs can decrease the time it takes to earn a postsecondary credential, keep students engaged in learning, and reduce the financial burden of a college education—at the same time helping move highly educated young people into the workforce more quickly.

Similarly, the time it takes adult learners to earn an industry skill credential can be reduced. For example, modularized curricula can promote advancement up a career ladder: workers could earn partial credentials quickly and build time for learning into work/family life. Job seekers and incumbent employees alike would benefit from accelerated adult basic

education and pre-college classes that qualify them to enter licensure and degree programs.

*Make the transitions from one segment of the education pipeline to another easier by improving the alignment between K-12 and postsecondary educational institutions and systems and by making workplaces more learning-friendly.*

Because learning takes place across the poorly connected segments of the education pipeline, transitions are difficult and confusing. For example, students entering ninth grade are often poorly prepared for high school. Students who pass high school courses easily may still need to take remedial courses in college. Students who complete classes at a community college often lose those college credits when they transfer to a four-year college. And those who leave school before earning a degree find it difficult to translate the education they have received into better jobs and higher wages. This lack of alignment is one reason so many college freshmen drop out.

### **Faces of the Future: Schools That Cross Boundaries**

Anthony has been enrolled at Dayton Early College Academy since 2003, although neither of his parents went to college.

“I think the teachers hope to prove that with the right environment, kids from different kinds of backgrounds—like troubled backgrounds, kids with parents who did not graduate high school, and if they did graduate high school didn’t go to college, and with siblings who didn’t find it good with the Dayton Public Schools and had trouble—they could actually open doors to students. They could open doors in the parents’ minds, in everybody’s minds in Dayton that with the right school environment, students could achieve great success.”

Dayton Early College Academy is an early college high school, a small school designed so that high school students can earn both a high school diploma and an Associate’s degree or up to two years of credit toward a Bachelor’s degree. These innovative schools have the potential to improve graduation rates and better prepare students for entry into high-skill careers by changing the structure of the high school years and compressing the number of years to a college degree.

High schools, postsecondary institutions, employers, and government agencies must collaborate to ease transitions between levels of education and between jobs. As a starting point, well-aligned exit and entrance expectations at every stage of the pipeline would help ensure that any credential or degree a person earned would be a valid signal that he or she has mastered the content for the next stage. For example, high school graduation expectations should align with the requirements to enter college or get a well-paying job. This requires streamlining the bewildering array of tests most students now take, including: state and local tests that may not count toward graduation; college admissions tests that may not cover what students learned in high school; and college placement tests that vary from school to school. Instead, multi-purpose high school assessments can double as entry/placement tests for the next level of education.

In addition, colleges should report back to high schools about the success of their students in the freshman year. High schools could use this information to adjust their curricula and methods of instruction and ensure that college freshmen hit the ground running. The same “report back” principle applies to other transition points: into high school and into the workforce from high school or college.

*Provide students with early exposure to and experience in college and careers through new partnerships among business, college, and K-12 education.*

Many high school students do not understand how their classes might connect to their future careers, and they often do not take the courses

## Faces of the Future: Education That Challenges

Hazel, a student at Community College of Denver, is rising to the challenge of college-level work and succeeding with strong support from her college counselor and other adults, even though most of her friends dropped out of high school and “don’t think college matters.”

“Once you’ve experienced a college-level class, you’re hooked, you want to learn more and more. . . . When people talk to you and tell you you have all this potential and you don’t use it, you feel like you’ve failed. At least that’s the way it was for me in my old high school. And I did fail. I dropped out. In college, they support and push you.”

Community College of Denver, with over 14,000 students, is the Colorado’s most diverse higher education institution, with 58 percent minority enrollment. Over 60 percent of students are the in their families to go to college. CCD is recognized nationally for addressing the gap between white and minority students in earning college degrees. The cornerstone of CCD’s achievements is integrating instructional innovation with case management and support services.

that would prepare them for work or college. In a recent study by ACT, only two-thirds of middle and high school students who said they planned to go on to college reported that they were taking a college-preparatory curriculum. Moreover, they do not know what kinds of career are possible or the extent to which their individual interests may match certain career options.

Through “multiple pathways,” many more young people—particularly from those groups now underrepresented in higher education—will see themselves as “college bound.” To more fully engage all students in

learning, a wide variety of opportunities, starting in middle school, can provide hands-on learning experience and exposure to college. Such opportunities include workplace internships, summer programs at colleges, and dual enrollment options for high schools and even middle school students, as well as even more innovative options, such as early college high schools spanning high school and the first two years of college. Career and technical education must be a quality option, based on the same principles as those for high school reform in general: academic rigor and pathways to further education and careers paying family-supporting wages.



## 2 PROMOTE LIFELONG LEARNING

Even young people and adults with the academic preparation and personal commitment to continue their education don't always make it through the pipeline to family-supporting careers and continual advancement. To create and maintain the skilled workforces our businesses and communities need, practice and policy must address the financial constraints, time pressures, and other barriers that often stand in the way.

- Create “learning-friendly” workplaces.
- Create “work-friendly” schools and education programs.
- Foster and build the capacity of a local infrastructure that aids and connects employers, individuals, and educational institutions.
- Create multiple reentry routes for those who leave the education pipeline at any point.
- Develop new mechanisms to ensure lifelong access to adequate, flexible financial aid for all qualified students, including adults who are in school part time or who are raising families.

### *Create “learning-friendly” workplaces.*

Employers who value their human resources create in-house environments and corporate policies that encourage and support workers in the ongoing pursuit of education. A mutually beneficial way to do this is to structure career ladders that explicitly link career advancement to the acquisition of new skills, and show clear rewards for ongoing learning. For instance, a health care aide who knows she can rise, step by step, to become a registered nurse or a hospital administrator is more likely to invest the time and money it takes to prepare for such jobs.

Employers can provide career and educational counseling that raises employee awareness about education options and helps them form personal development plans that meet both the company's and the individual's goals. Generous tuition assistance for learning—going beyond narrow skill development tied only to an employee's current job—would address financial barriers to career advancement. Flexible work schedules that enable employees to take time off to register for classes or study for final exams can further encourage ongoing learning.

### *Create “work-friendly” schools and education programs.*

Most students, especially at the community college level and above, must work, whether to pay tuition, support a family, or both. With their personal budgets and time stretched thin, many are overwhelmed by rigid school schedules and the time necessary to take classes and complete homework assignments.

In an effective education pipeline, work-friendly learning environments would offer flexible schedules—including evening and weekend classes—and hold classes at accessible locations in the community and at the workplace. For example, through partnerships with employers, community colleges can offer classes at hospitals and nursing facilities, drawing their enrollment from low-income nursing assistants and other staff eager to advance along clear career pathways.

Work-friendly education would be distinguished by the depth of academic and counseling support offered to ensure student success, even for those with very low skill levels. Entering students might begin with preparatory classes to raise math and reading levels to meet program standards, as well as self-paced basic education, including ESL if necessary. They would also receive group tutoring and assistance in such areas as test-taking and study skills.

A key to the work-friendliness of education would be its customization for incumbent workers. Job seekers and incumbent employees alike would benefit from accelerated adult basic education and pre-college classes that qualify them to enter licensure and degree programs. For example, dividing the curriculum leading to a college degree or other high-level creden-





tial into modules can shorten the time to earning lower-level credentials of value in the labor market, even as the learner keeps the ultimate goal in mind. And programs should provide additional supports geared to the needs of working students, ranging from child care and transportation assistance to advice about sources of financial aid.

*Foster and build the capacity of a local infrastructure that aids and connects employers, individuals, and educational institutions.*

Workforce intermediaries can take the lead in serving both the skill needs of employers and the career needs of workers. These organizations help close gaps between what the public workforce development system provides and what workers and employers need. Operating locally and regionally, they can aggregate the requirements of multiple employers and promote and deliver effective advancement models for thousands of individuals. As a result, they can achieve advancement outcomes far greater than those of traditional workforce development programs and play critical roles for employers and for low-income individuals.

However, workforce intermediaries are still rare, especially those focused on career advancement with comprehensive, multi-year strategies that address the nation's growing income, education, and skills gaps. Moreover, today's workforce intermediaries are often small, limited in their organizational sophistication, and held back by a major challenge: securing financing not just to sustain services to employers and jobs seekers but to expand such efforts to a scale that makes a real difference to communities. New approaches to financing

intermediaries must promote two distinct priorities. First, they must strengthening organizational capacity, expanding and sustaining workforce intermediary organizations as stable, local institutions. Second, financing must focus on advancement, expanding and strengthening the ability of workforce intermediaries and the workforce system to support the needs of workers and their employers to continually upgrade skills targeted at high-paying, high-growth jobs.

*For those who leave the education pipeline at any point, create multiple reentry routes.*

Lifelong learning is the goal, but until the education pipeline integrates adult learning into the constraints of individual lives, many people will leave and reenter it—often many times. And with each reentry, they bring with them diverse educational and other needs, starting with varying levels of academic preparation.

For students who drop out of high school, multiple pathways to postsecondary education and credentials include community-based dropout recovery programs and alternative high schools. Dropouts who need



personalized support services and help navigating life crises would get assistance through partnerships among education, workforce, and public care systems, such as foster care, mental health, and juvenile justice. Scaled-up community college initiatives would offer high school diplomas or GED programs on campus, help students overcome their fears of college, provide supports and advising, and create effective routes to further education.

### **Faces of the Future: Educating the 21st Century Workforce**

When Tina, a 34-year-old single mother of three, completed an 18-month training program, she moved from her \$10-an-hour job as a Certified Nursing Assistant at a long-term care facility into a position as a Licensed Practical Nurse that paid twice as much. In the process, she pulled herself and her family out of poverty.

Tina's advancement into a better-paying job was the product of her own determination—and an innovative partnership designed to create career ladders that nurses' aides could climb to escape low-wage work. WorkSource Partners, Inc., a Massachusetts workforce development company, allied with Holyoke Community College, and Genesis Elder Care, a nursing home operator, to create a program that fills nursing vacancies by helping long-term care employers and community colleges develop comprehensive CNA-to-LPN career ladder programs. The curriculum for Tina's training was co-designed by the employer, the college, and WorkSource Partners. Genesis's tuition reimbursement program pays the cost of community college classes for its employees, and it receives substantial financial benefit in return, as well as improved patient care, as a result of reduced staff turnover and fewer job vacancies.



Adult basic education programs—in community colleges and other venues—must be flexible and accessible, including part-time evening and weekend programs. They should enable adults to develop the literacy, math skills, and English language proficiency that prepare them for the *further* education and skills training needed in today’s economy. To achieve this mission, adult basic education must change from a largely stand-alone system, inadequately connected to other education and workforce development systems, to one that plays a vital role in partnership with other educational and training institutions, together creating advancement pathways to postsecondary skills and credentials.

For many immigrants, gaining English language skills is a critical first step toward transitioning to life in the United States. Programs that link work and learning and provide a continuum of learning opportunities can help immigrants achieve self-sufficiency and make significant contributions to local and regional economies.

In short supply today are smooth transitions between jobs, particularly for “dislocated” workers. Assistance programs for the newly unemployed

should be universally available, including an “education account” that all workers could tap after five years of employment or if they lose their job. These programs should include supports that enhance worker mobility and lifetime employability, such as portable pensions and health benefits.

*Develop new mechanisms to ensure access to adequate, flexible financial aid for all qualified students throughout their lifetime, including adults who are in school part time or who are raising families.*

Money is a primary reason people who are eager to learn drop out of the education pipeline—a Catch-22 because many Americans pursue further studies as a step to financial security for themselves and their families. We cannot afford the current situation where hundreds of thousands of qualified individuals do not attend college because of high costs.

One option for restructuring the education financing system is to create federally sponsored lifelong learning accounts that would allow all workers to contribute pre-tax dollars, with

matching employer contributions. Employees who qualify for low-income tax credits would be able to waive their own contributions, relying on employer contributions alone. Employees could draw on these accounts, which would serve a dual purpose: financing ongoing education and pushing education providers toward flexibility in meeting demand from millions of account holders.

Another option, which could start earlier in life, is to create Individual Education Accounts—a federal contribution at birth to be used for education and training at age 16 to 18 or later. This tax-preferenced account would be designed to yield enough money for two years of public post-secondary learning, whether in degree or certificate programs. The accounts would accept additional contributions from the account beneficiary and from third parties, including employers (like lifelong learning accounts). Employers would get tax breaks for contributions.

Such financing mechanisms will require significant public investments. Yet the returns to society, the economy, and individuals will be significant.

### Faces of the Future: Paths to a Diverse Workforce

Life looked bleak for Manuel. At age 20 he had already had several brushes with the law and had had to enroll in a county-run program for juvenile offenders. When he was released, he wanted to change his future.

Fortunately, the opportunity to do just that was waiting for him in the Construction Gateway Program. The program, which provides five weeks of boot-camp-style construction training for homeless, unemployed, and underemployed adults, including prisoners and ex-offenders, is the brainchild of Skillpoint Alliance of Austin, Texas.

Skillpoint’s Construction Gateway Program gave Manuel important skills and credentials, including knowledge of OSHA safety requirements and credits from Austin Community College. As he neared the end of his course work, he and other Construction Gateway students attended a local job fair, where Intertech Flooring drew his interest. The company hired him three days after his graduation. Manuel still works at Intertech and he still attends the community college, moving toward a personal goal: to become a teacher. He is an inspiring speaker at Construction Gateway graduations. His story raises the hopes of new graduates and the guests who care about them.

## Agenda for Action

Restructuring the nation's education pipeline into a flexible system that meets the needs of people of all age levels with diverse backgrounds and varying levels of knowledge and skills can seem like an almost insurmountable challenge. But it can be done, as we can see in successful programs and in the beginnings of systemic changes to support and drive improved quality and connections. The challenge is to make success the norm, not the exception.

It will take vision, innovation, and courage to overcome institutional barriers and create an education pipeline that enables diverse individuals of every age to accelerate and extend their learning. The varied players in the education and workforce development pipeline, separately and in partnership, can take the following steps immediately. By no means is this action agenda comprehensive, but it points the way toward the kinds of changes that will be needed for local innovations to become stronger and more widespread. By joining together, communities will invest in and continuously replenish the educated citizenry that will make the twenty-first century the era of the new American dream.



### ► WHAT EMPLOYERS CAN DO:

*Promote learning—in schools and in the workplace*

- Provide leadership in efforts to raise the quality of the nation's education and skills pipeline.
- Engage in partnerships—with schools, school systems, networks of schools, and states—that advocate for, support, and enable the start up and long-term success of high-quality schools.
- Work with high schools and post-secondary institutions to define the critical skills and knowledge that students need to succeed in the workplace.
- Provide hands-on learning experiences, such as internships, that give students real-world work experience and expose them to career options.
- Collaborate with postsecondary institutions and workforce development systems to create explicit career paths that link ongoing education to career advancement in the firm or industry.
- Become learning-friendly workplaces by providing up-front tuition payments for entry-level workers, career and educational counseling, and flexible work schedules.

### ► WHAT SECONDARY AND HIGHER EDUCATION CAN DO:

*Raise standards, create new school models, support achievement*

- Create and engage in academic environments, new school models, and support structures—including personalized learning environments, a variety of learning opportunities,



networks of high-performing institutions, teaching skills, and assessments—that ensure that all students master the content and skills they need to succeed in college and/or work.

- Work together to raise high school graduation requirements and align them with college and workplace entrance expectations, so that all students leave high school prepared to succeed in college and work.
- Provide supports to help all students succeed, including more personalized learning environments and a variety of learning opportunities in and out of school and during and beyond the school day.
- Create work-friendly learning environments, including opportunities for hands-on learning experiences, effective career exploration, and flexible class schedules.
- Develop multiple pathways to postsecondary education and credentials, including community-based dropout recovery programs and alternative high schools within the public education system.

#### ► **WHAT STATE AND FEDERAL GOVERNMENTS CAN DO:**

*Improve measurement of individual progress, support innovation, reward outcomes*

- Create incentives, through funding and other public policies, for aligning expectations between and among high school, postsecondary education, and the workplace.
- Create incentives for developing new education and training systems and approaches, such as charter schools, early college high schools, flexible community college and adult basic education programs, and effective workforce development systems.
- Provide incentives and supports for schools that serve the most disadvantaged students so these institutions can extend learning time and help young people catch up.
- Create incentives for business and others to develop and widely implement technology-based solutions for improving assessment and accelerating education and skill development, particularly for disadvantaged youth and adults.
- Create public and private financing mechanisms that encourage entrepreneurial workforce program developers and operators to create and expand effective occupational training programs for less-skilled workers and enable every qualified student to earn a college degree and take part in ongoing education.

- Make programs for “dislocated workers” universally available, including accounts that workers could tap after several years of employment or if they lose their job, and provide additional supports, such as portable pensions and health benefits, that enhance worker mobility and lifetime employability.

#### ► **WHAT THE PUBLIC WORKFORCE DEVELOPMENT SYSTEM CAN DO:**

*Organize employers, the education system, and government to promote advancement*

- Promote the alignment of economic development, workforce development, and higher education.
- Target economic sectors and occupations that have significant labor needs and also provide opportunities for individuals to gain skills and advance to better jobs.
- Organize multiple partners and funding streams around common goals, bringing together businesses, labor unions, educational institutions, and social service agencies to design and implement programs and policies that improve the functioning of the labor market for employers and individuals.
- Focus practice and policy on family self-sufficiency, which requires a continuum of services and multiple entry points and make it easier for an individual to get a job, stay employed, and advance.
- Create and fund public-private financing vehicles that would underwrite expanded training opportunities for low-skill incumbent workers in order to improve employers’ ability to fill in-demand jobs and low-income workers’ ability to advance into middle-class jobs.

