

STEM Learning Exchanges

Accelerating the Illinois Economy by advancing the
Illinois Pathways Initiative

Illinois Technology Education Conference

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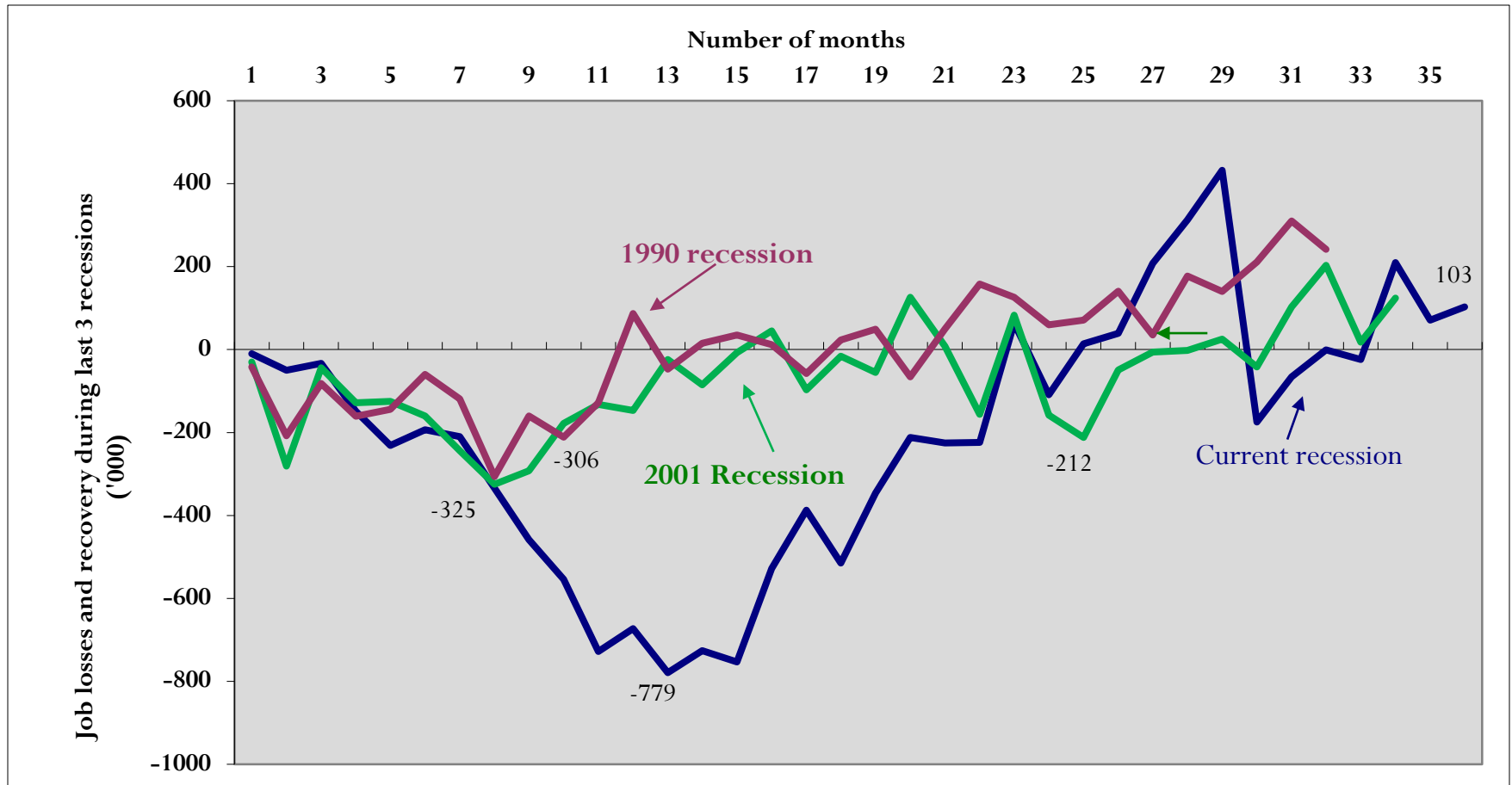
Agenda

- 1) State of the Economy: The Economic Recession and Future Projections
- 2) The Talent Pipeline: Educational Attainment and Credentialing in the New Economy
- 3) Promoting Career Readiness through the Illinois Pathways Initiative
 - A. P-20 STEM Programs of Study
 - B. STEM Learning Exchanges
- 4) Questions & Discussion

State of the Economy: The Economic Recession and Future Projections

State of the Economy - Economic Recovery

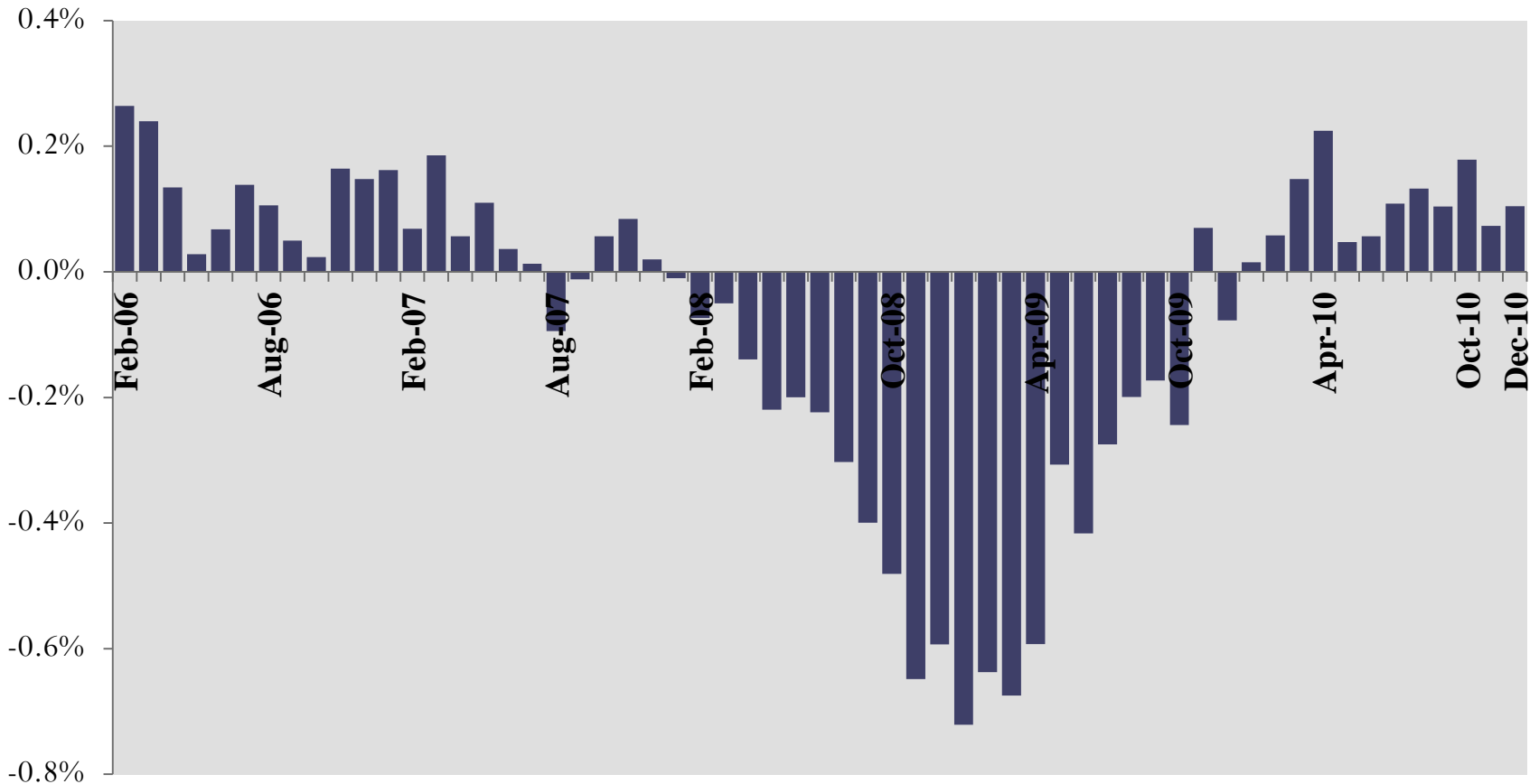
The worst of the recession is over. Non-farm payroll employment has slowly picked up with positive gains since October 2010.



Source: Georgetown University Center on Education and Workforce.

State of the Economy – Employment Growth

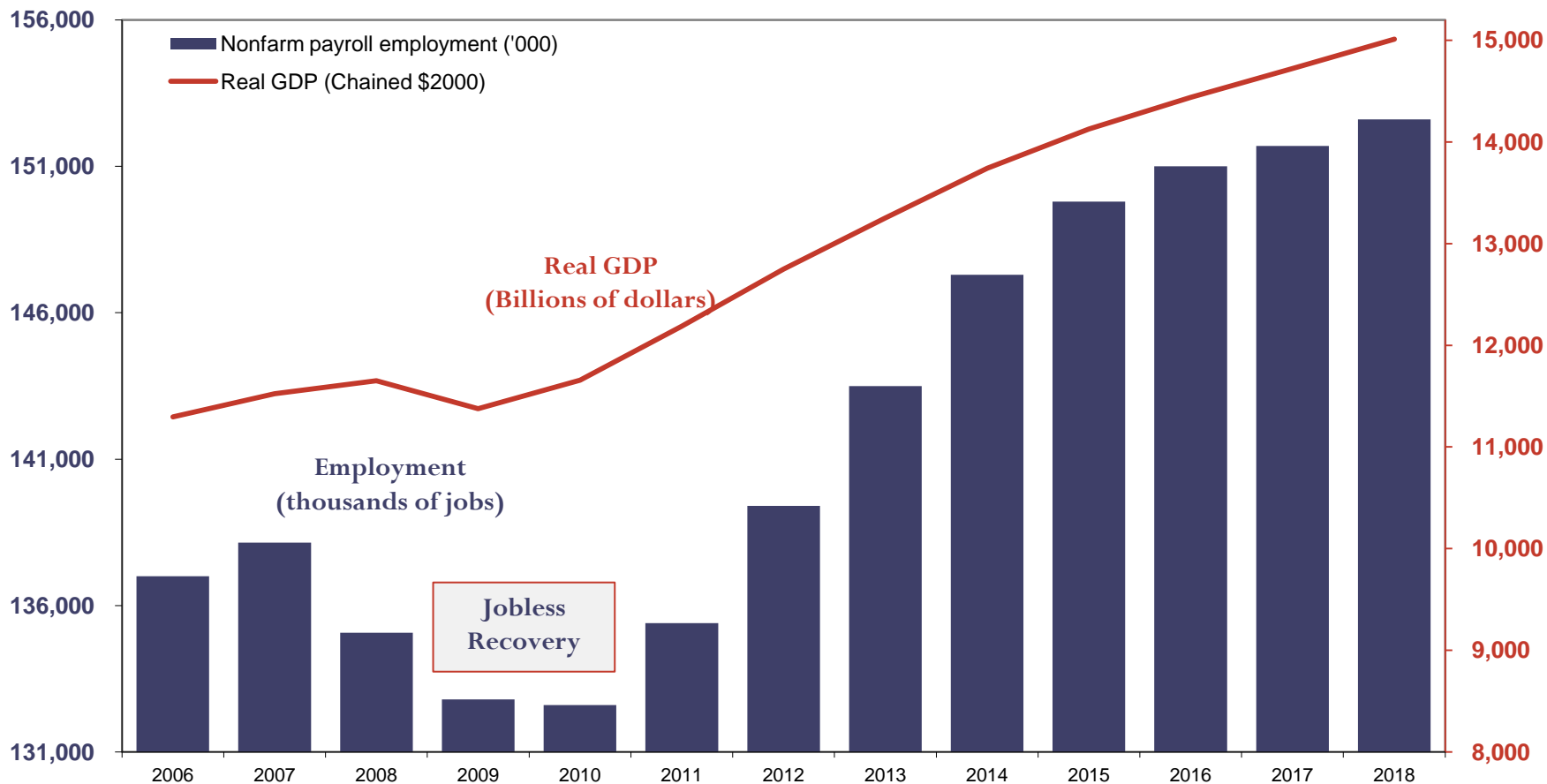
The year 2010 added 1.3 million private sector jobs to the economy, the strongest private sector job growth since 2006



Source: Georgetown University Center on Education and Workforce.

State of the Economy – Employment Growth

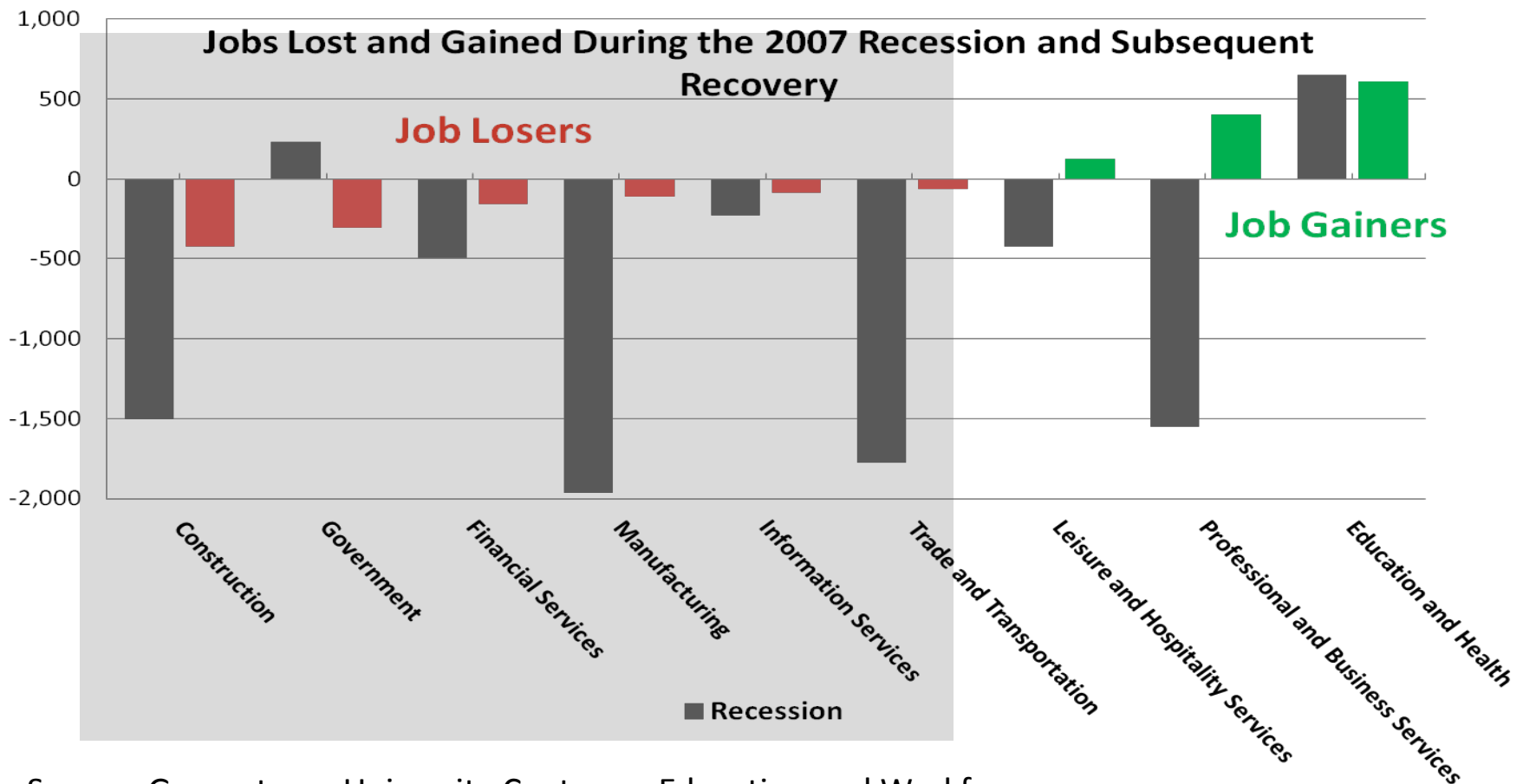
Employment growth is not keeping up with GDP growth, but we project that it will catch up by 2018.



Source: Georgetown University Center on Education and Workforce.

State of the Economy – The 2007 Recession

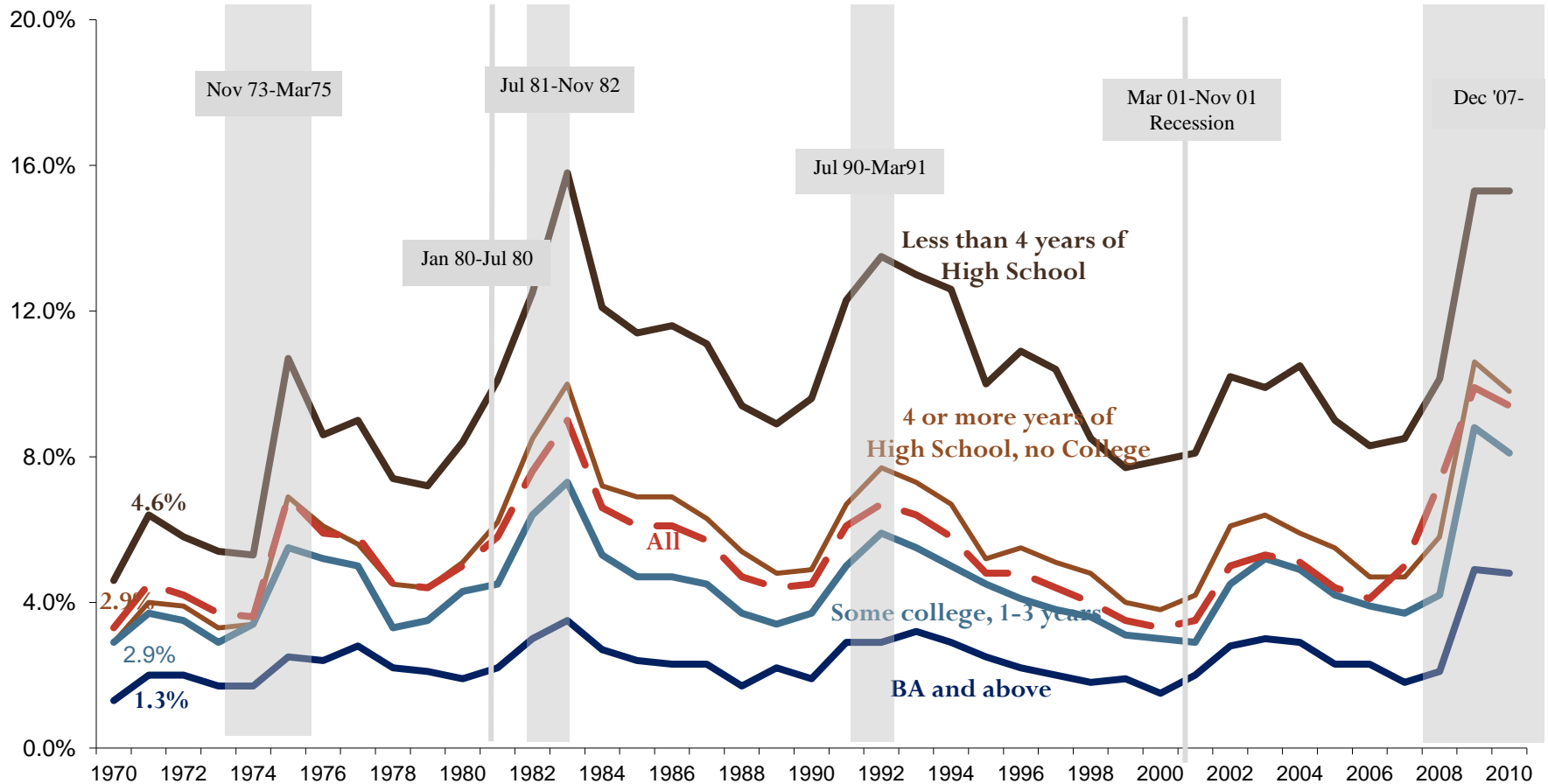
7.3 million jobs were lost since this recession began in December '07 and ended in June '09. Professional and Business Services and Education and Health have shown net gains overall.



Source: Georgetown University Center on Education and Workforce.

State of the Economy – Unemployment by Credential

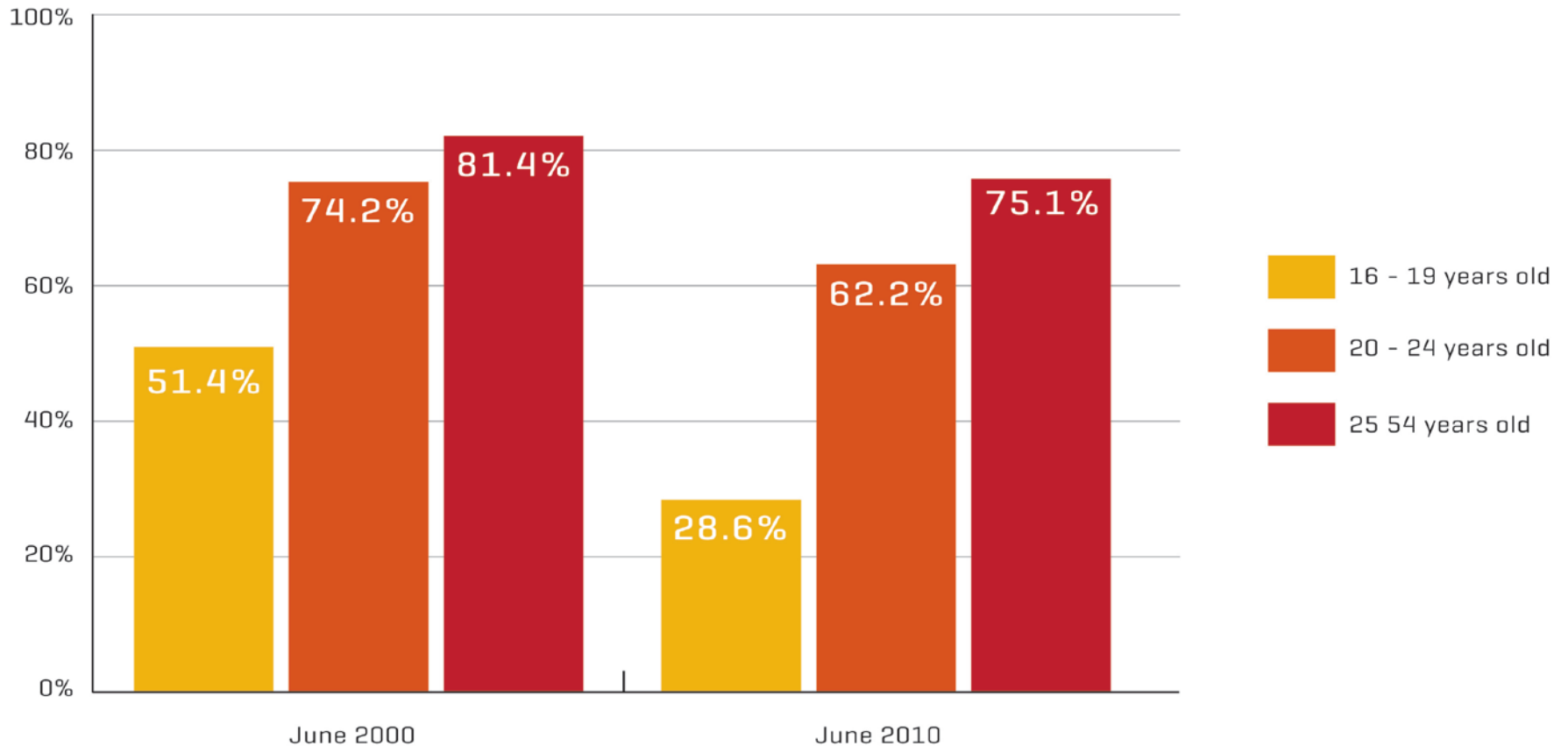
Unemployment rates look very different based with postsecondary credentials.



Source: Georgetown University Center on Education and Workforce.

State of the Economy – Employment by Age

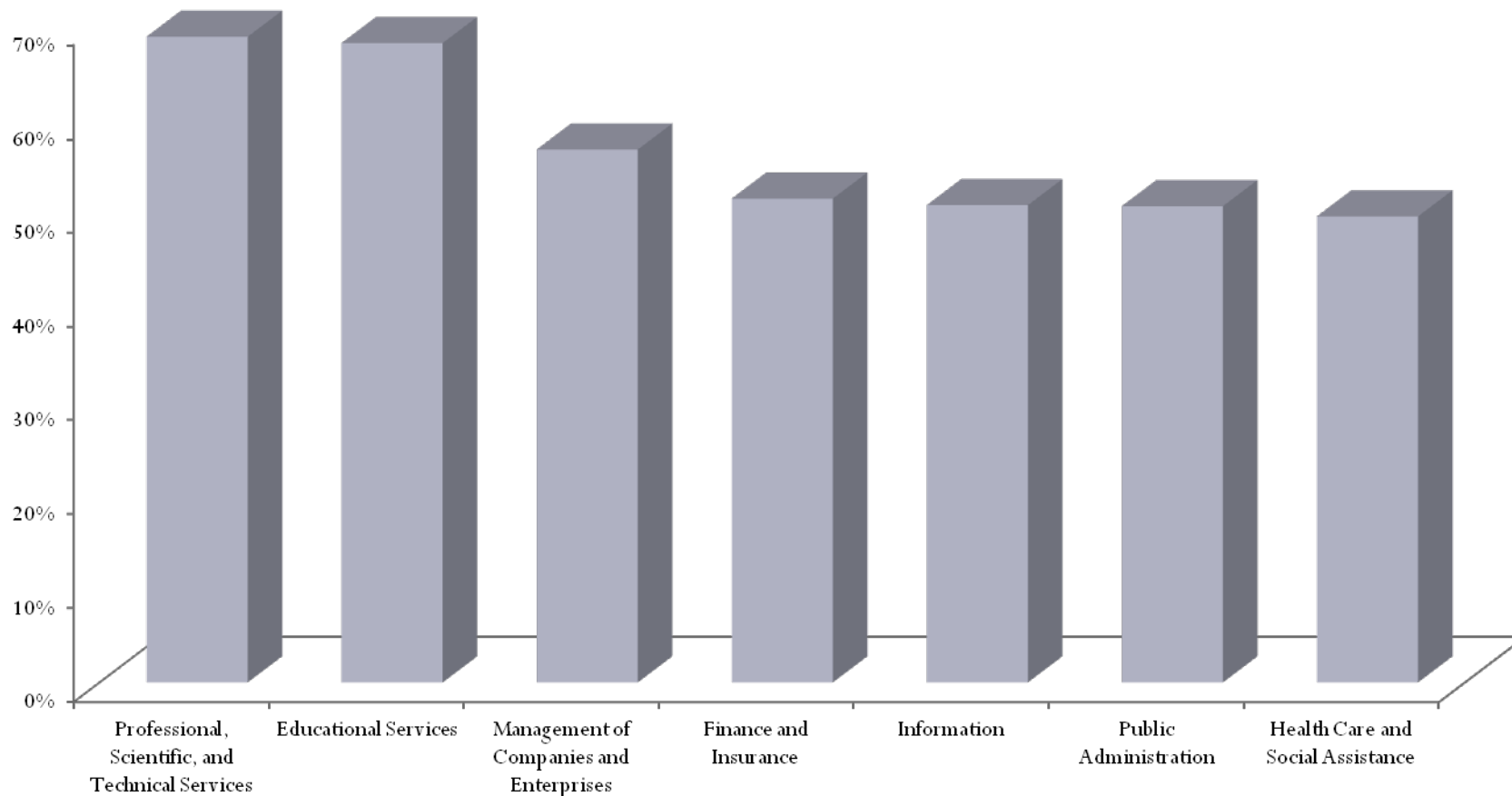
Shrinking employment opportunities: Teens and Young Adults have been hit the hardest by the Great Recession



Source: Center for Labor Market Studies, U.S. Bureau of Labor Statistics; Harvard University *Pathways to Prosperity Report*.

State of the Economy – Impact of Retirements

Several key industries will lose most of their postsecondary-educated workers with the Baby Boom.

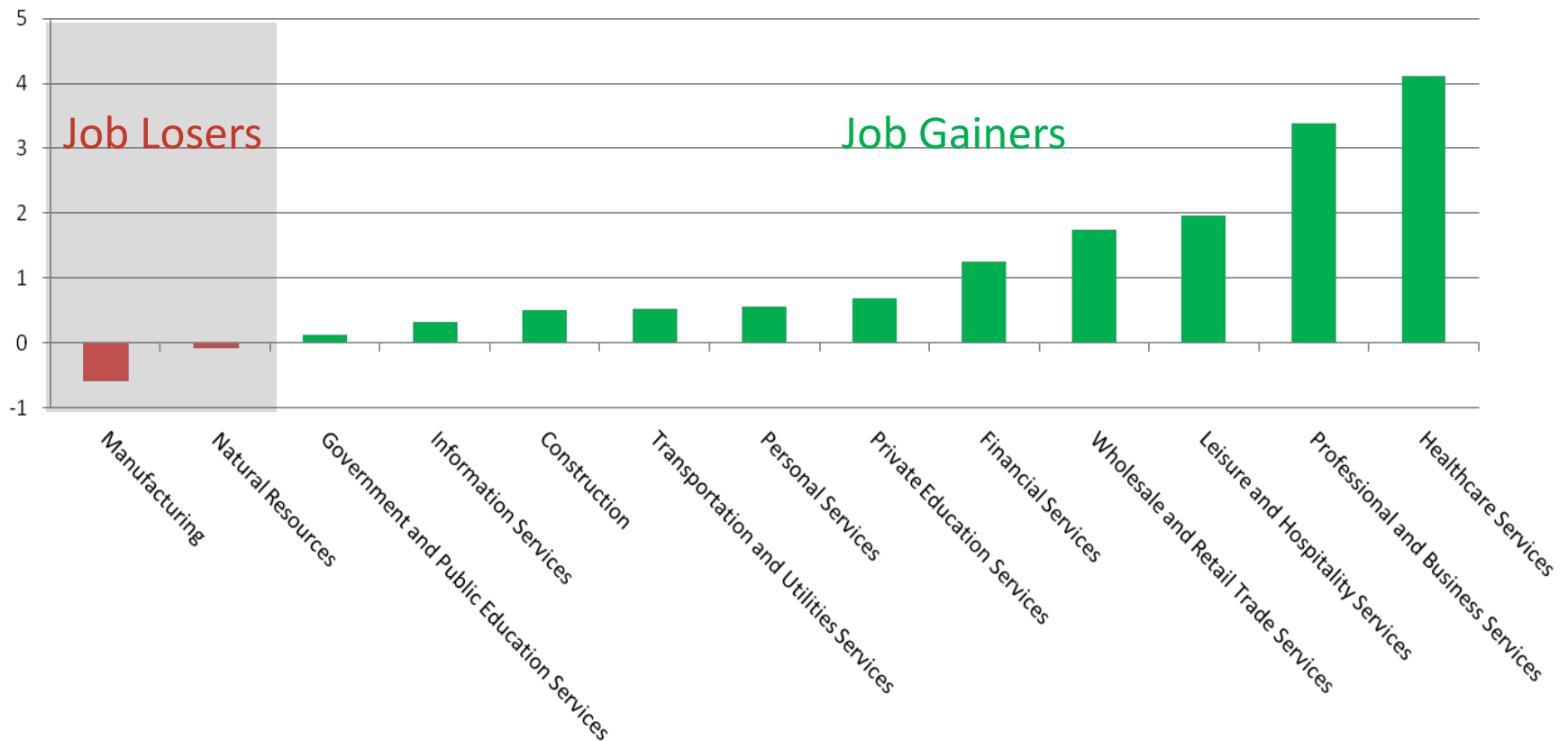


Source: Georgetown University Center on Education and Workforce.

State of the Economy – Structural Change Patterns

These patterns of structural change will continue through 2018 and beyond.

Projected Change in Employment 2008-2018 (millions)

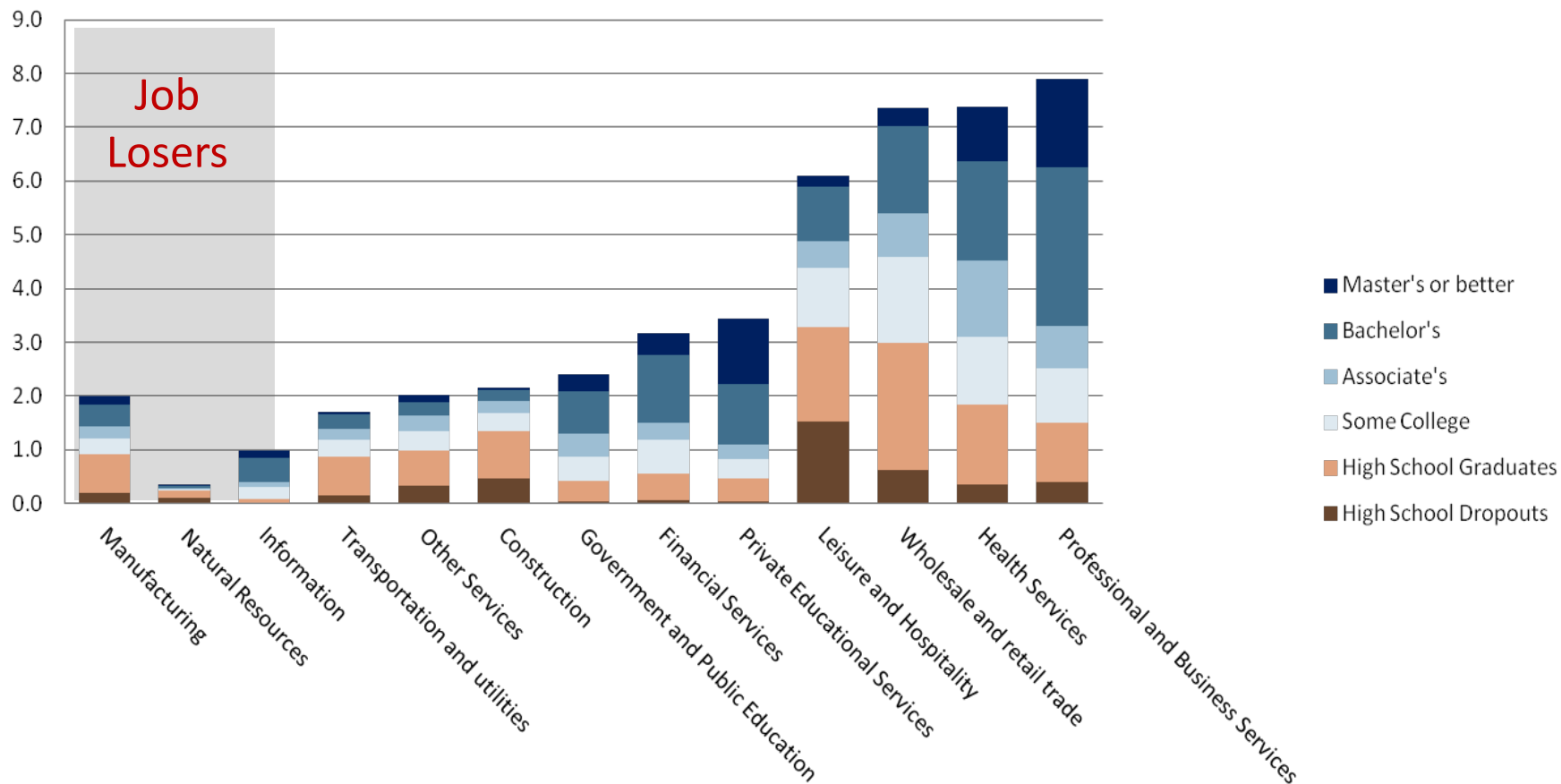


Source: Georgetown University Center on Education and Workforce.

State of the Economy – Projected Job Openings

Even in declining industries there will be job openings.

Job Openings by Industry and Education Level (Millions)



Source: Georgetown University Center on Education and Workforce.

State of the Economy – Summary

- ✓ The economy is both recovering and changing, which needs to feedback into how we understand our education and training programs.
- ✓ While we are in a recovery, the recovery is slow and we need to understand where the opportunities will become available.
- ✓ While several industries are projected to have net job losses, the reality is that given retirements there will be significant employment needs in areas like manufacturing.

The Talent Pipeline: Educational Attainment and Credentialing in the New Economy

The Talent Pipeline – Demand Driven Economy

In 1973, a high school diploma was the passport to the American Dream.

- 72% of the workforce of 91 million had no more than a high school degree.

Post-secondary education is necessary to compete in the global economy.

- Between 1973 and 2007, we added 63 million jobs.
- Jobs held by those with no more than a High School education fell by 2 million.
- Workers with a high school education or less now make up just 41% of workforce.

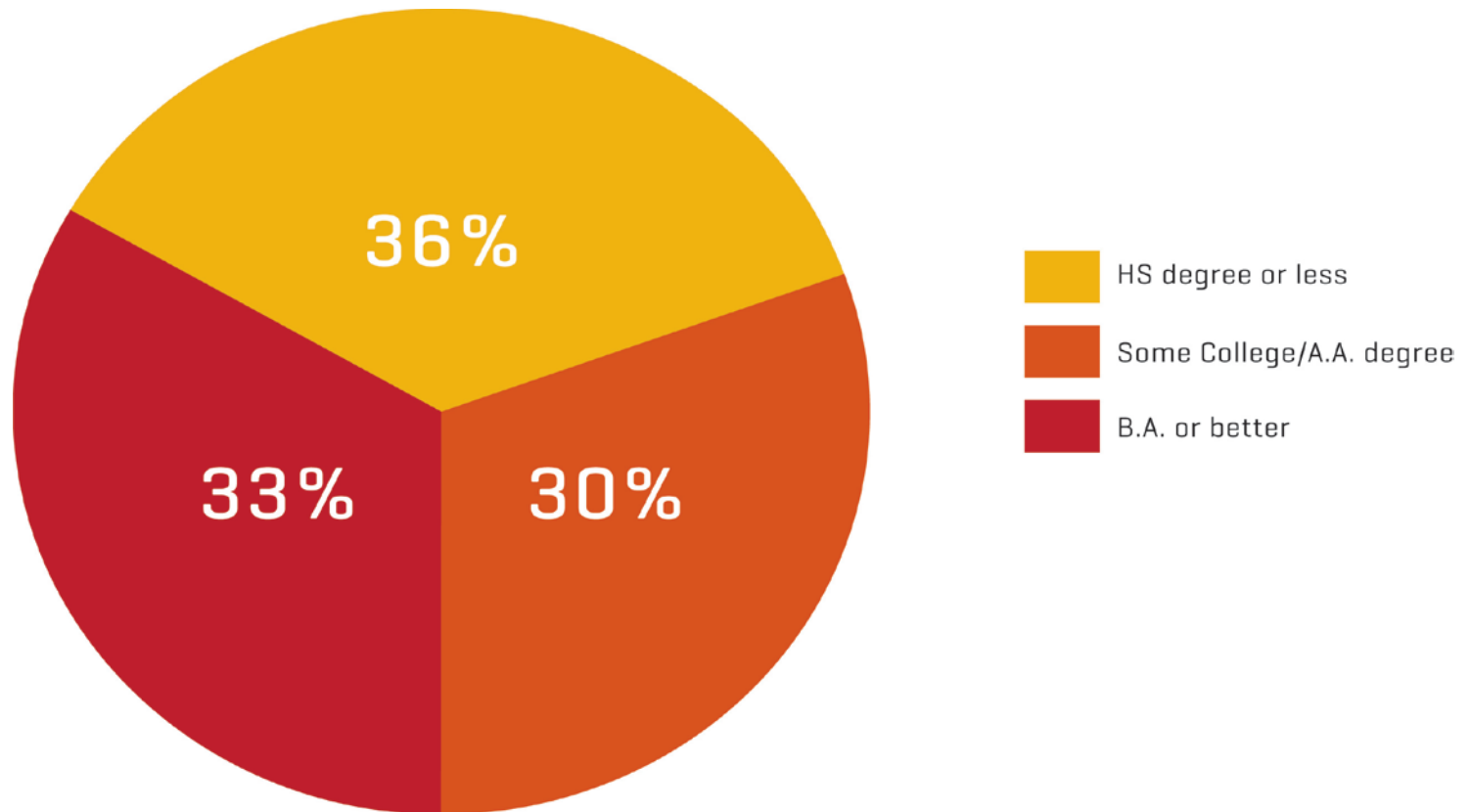
Economic forecasters widely agree that these trends will continue.

- 63% of all jobs will require at least some college in 2018, up from 59% now.
- The U.S. will need to produce 22 million more postsecondary education degrees by 2018, but we are likely to fall short.

Source: Georgetown University Center on Education and the Workforce; Harvard University *Pathways to Prosperity Report*.

The Talent Pipeline – Jobs by Credential

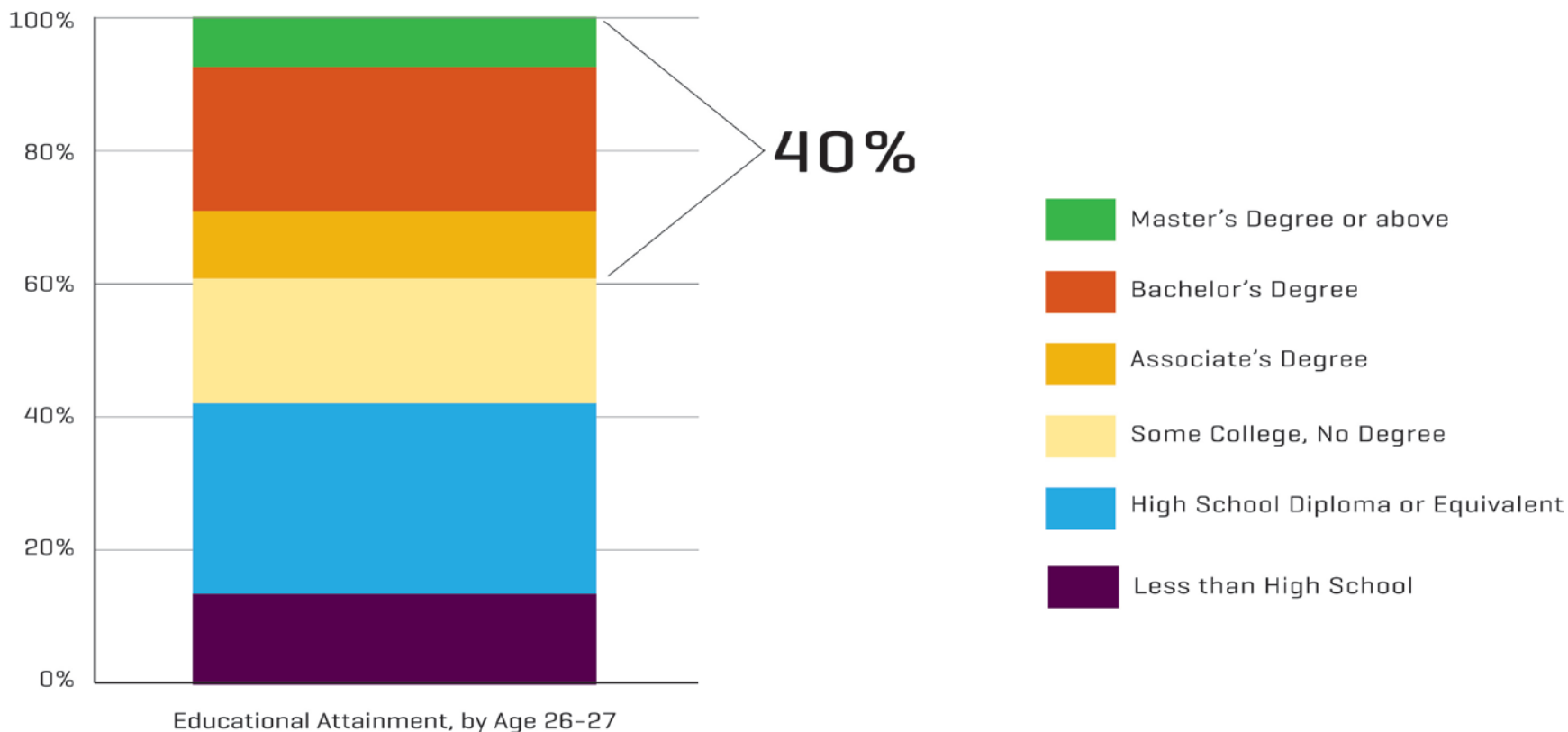
College for “all” does not mean everyone needs a B.A. Even in this decade most jobs do not require a B.A.



Source: March CPS data, various years; Georgetown University Center on Education and the Workforce; Harvard University *Pathways to Prosperity Report*.

The Talent Pipeline – U.S Degree Attainment

The current U.S. reality: only 40% of 27-year olds have earned an A.A. degree or higher

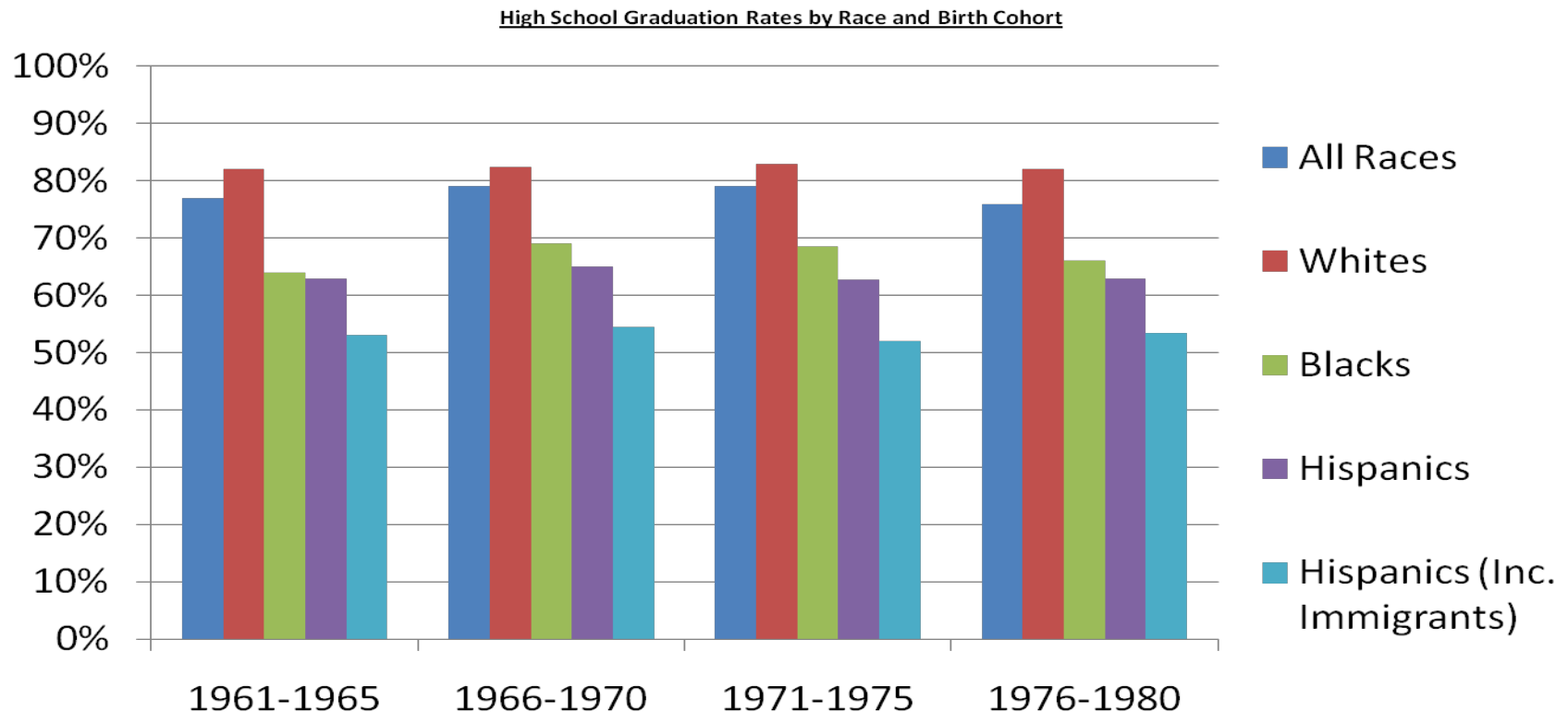


Note: Represents data collected in surveys between 2006-2008; GED is approximation based on data from GED Testing Program.

Source: Current Population Survey Annual Social and Economic Supplement; Harvard University *Pathways to Prosperity* Report.

The Talent Pipeline – H.S. Graduation Stagnation

Despite two decades of reform, high school graduation rates have not changed much since the 1980s



Note: Does not include GED recipients. Unless indicated, does not include recent immigrants. Rates are for age group of 20-24 or 25-29 dependant on their age at the time of census

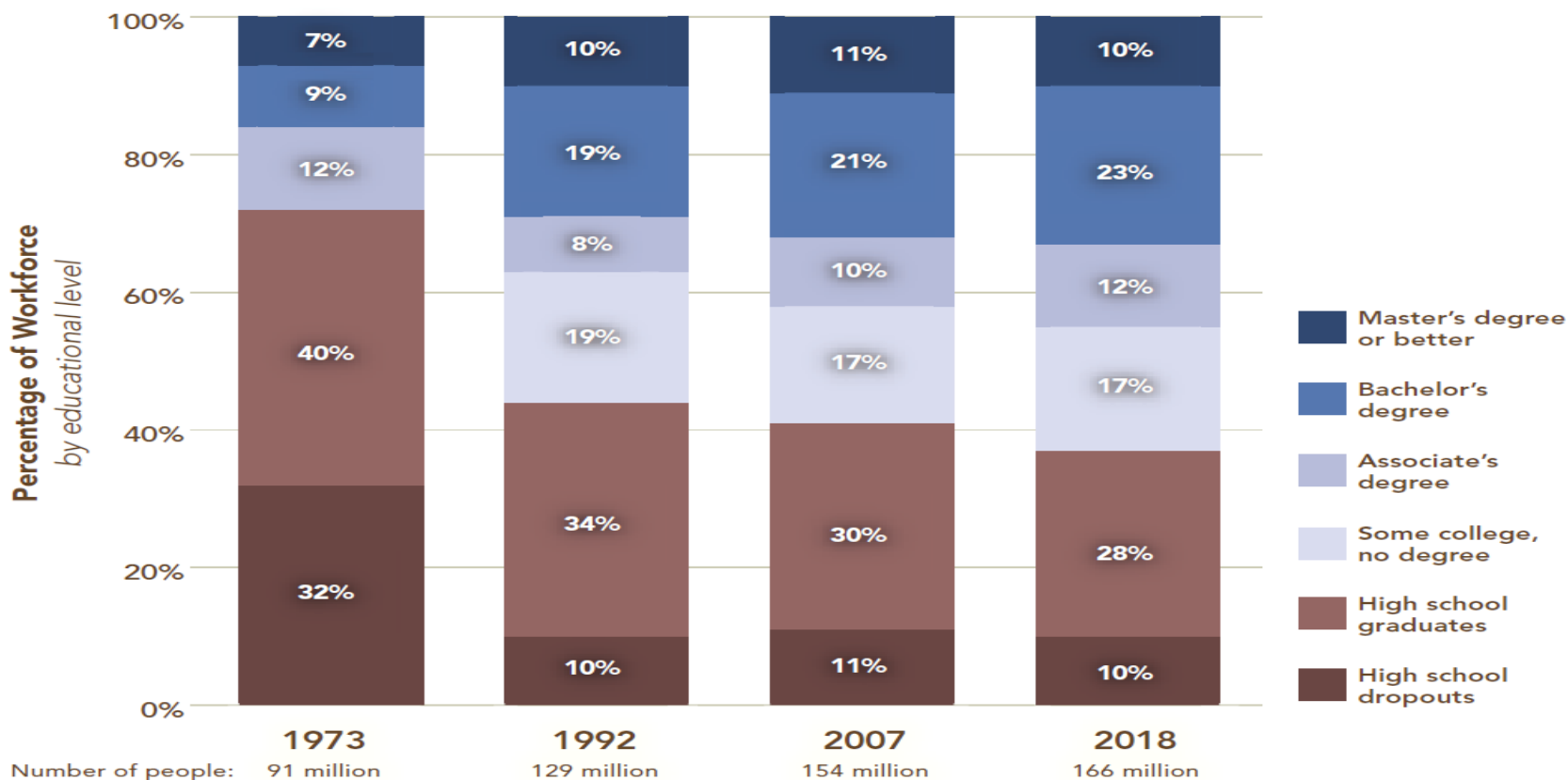
Source: Heckman and LaFountain (2007), U.S. Census data, and other sources; Harvard University *Pathways to Prosperity* Report.

The Talent Pipeline – U.S. Degree Attainment

Demand for postsecondary education has increased, and will continue to increase during and after the recovery.

By 2018, about two-thirds of all employment will require some college education or better.

Source: Authors' analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018



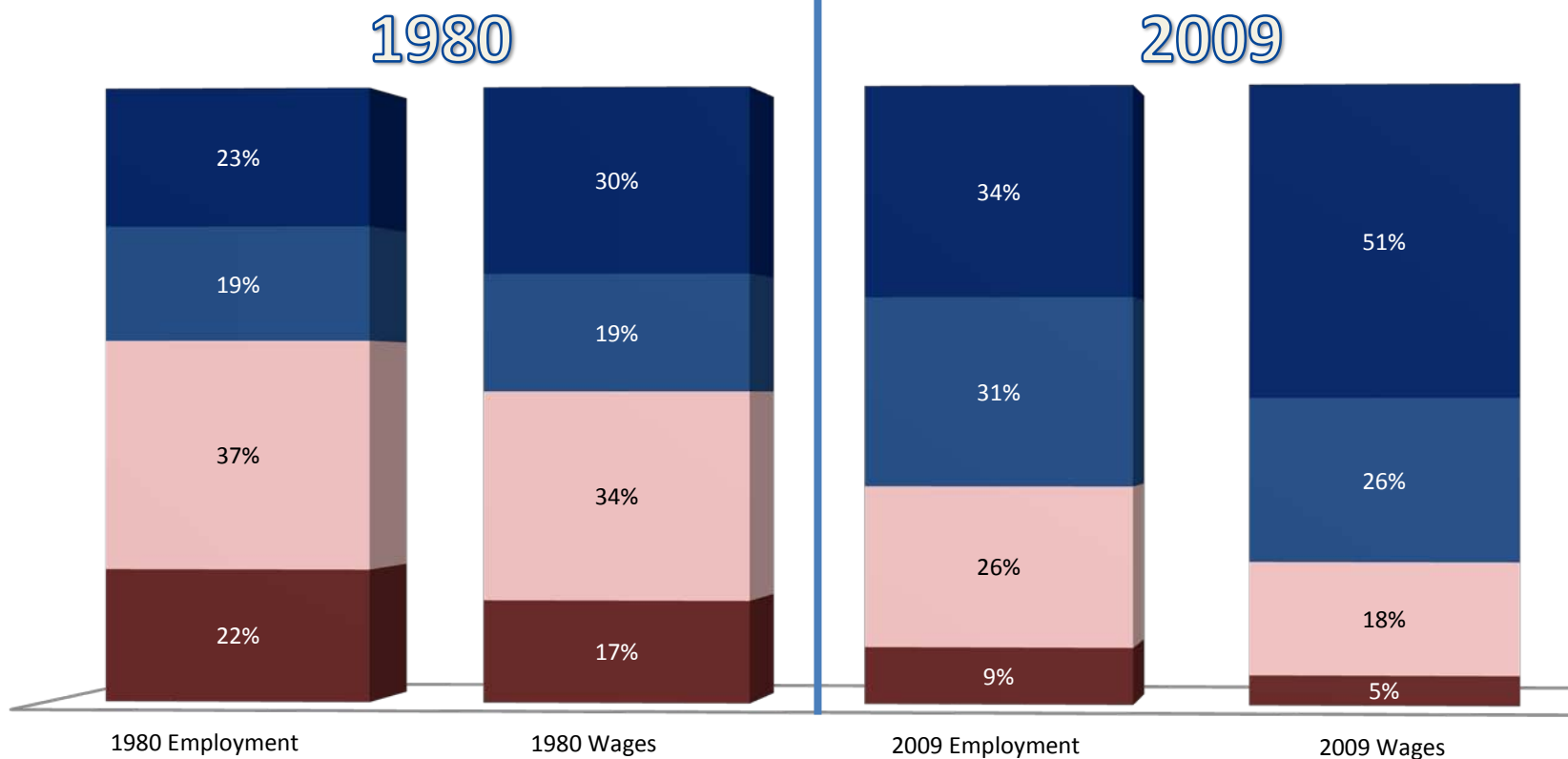
Source: March CPS data, various years; Georgetown University Center on Education and the Workforce forecast of educational demand to 2018

The Talent Pipeline – Wage Earnings by Degree

Postsecondary-educated workers now earn almost 80% of the nation's wages.

Wage and Employment Shares by Education (25-65)

■ High School Dropout ■ High School/GED ■ Some College/AA ■ Bachelor's and higher



Source: Georgetown University Center on Education and the Workforce

The Talent Pipeline – IL Graduation Rates

More than 70% of IL students who graduate high school, start some kind of advanced training or education within two years of receiving their high school diplomas.

Yet for too many, the journey ends long before graduation day. They become college dropouts.

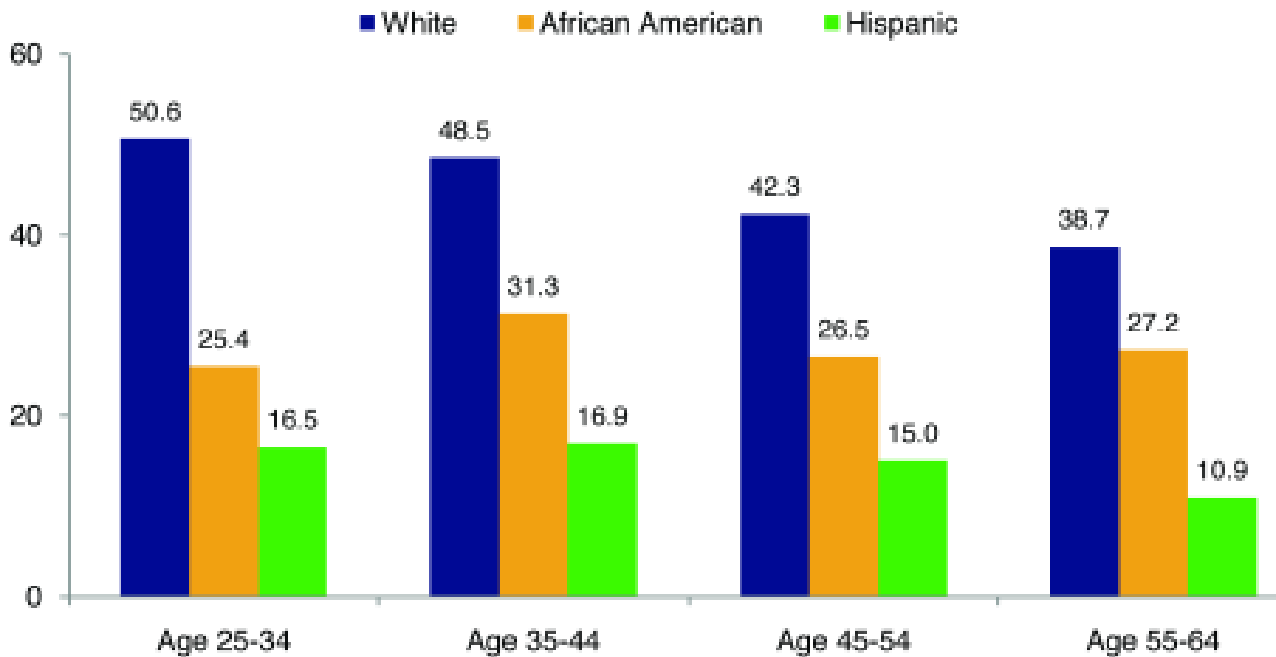
- Just over half of students who start 4-year bachelor's degree programs full-time finish – in six years.
- Fewer than three out of ten students who start at community colleges full-time graduate with an associate degree in three years.

In Illinois, of every 100 9th grade students...

- 46 enter college the fall after graduating from high school;
- 11 graduate with a bachelor's degree in four years;
- 4 graduate with an associate's degree in three years; and
- 43% of Illinois' young adults (ages 25-34) have a college degree.

The Talent Pipeline – Education by Race in IL

Educational Attainment Key to Skilled Workforce



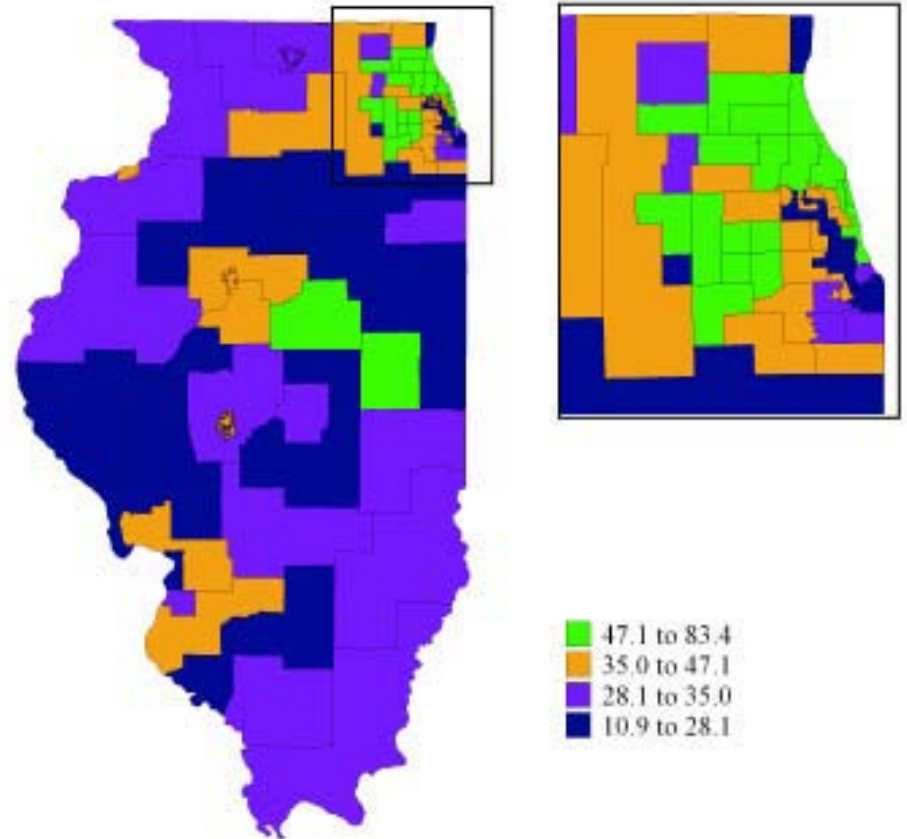
Percent of adults with associate's degree or higher, by age and race/ethnicity, 2006. Increasing college degrees among all Illinois students will be crucial for Illinois to meet the workforce needs of the future.

Source: *IBHE Public Agenda for College and Career Success*

The Talent Pipeline – Education by Region in IL

Percent of population age 25-64 with an associate's degree or higher, 2006

Regional variations in college credentials show large gaps – and opportunities – in raising the level of educational attainment in Illinois.



Source: *IBHE Public Agenda for College and Career Success*

The Talent Pipeline – Skills Gap and Mismatch

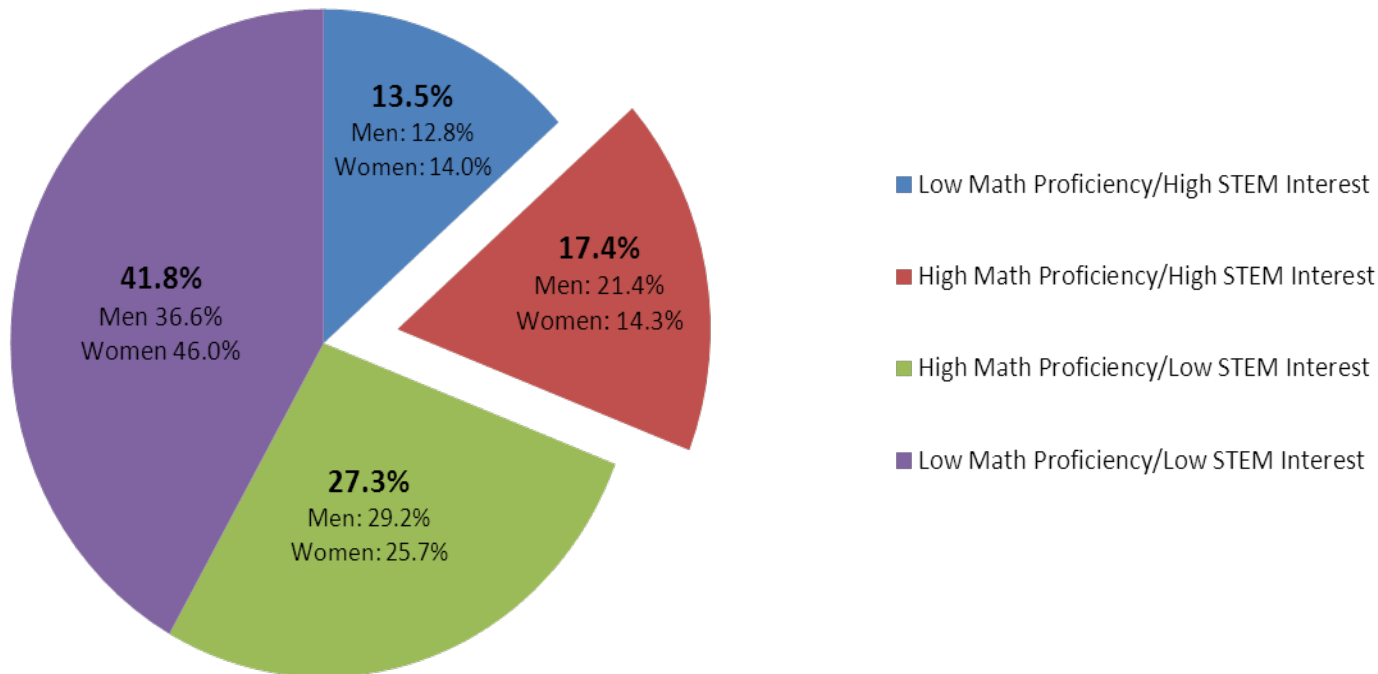
- Currently there exists a mismatch between what current and future employers need and what prospective employees are prepared to do.
- U.S. employers will have 47 million job openings between 2010 and 2018, 30 million of which will require some form of postsecondary education. 14 million job openings will be in the “middle skill” category requiring either an associate’s degree or an industry credential.
- The skills gap is most acutely felt in STEM areas, including occupations in manufacturing, healthcare, information technology, R&D, etc...

Source: Georgetown University Center for Education and Workforce; “Beyond Home Ec: Vocational Programs are a Good Investment,” by Andrew P. Kelly (National Review)

The Talent Pipeline – U.S. High School STEM Interest

American students' math proficiency and STEM career interest decline throughout high school. By 12th grade, only 17% of students are math proficient and interested in a STEM career.

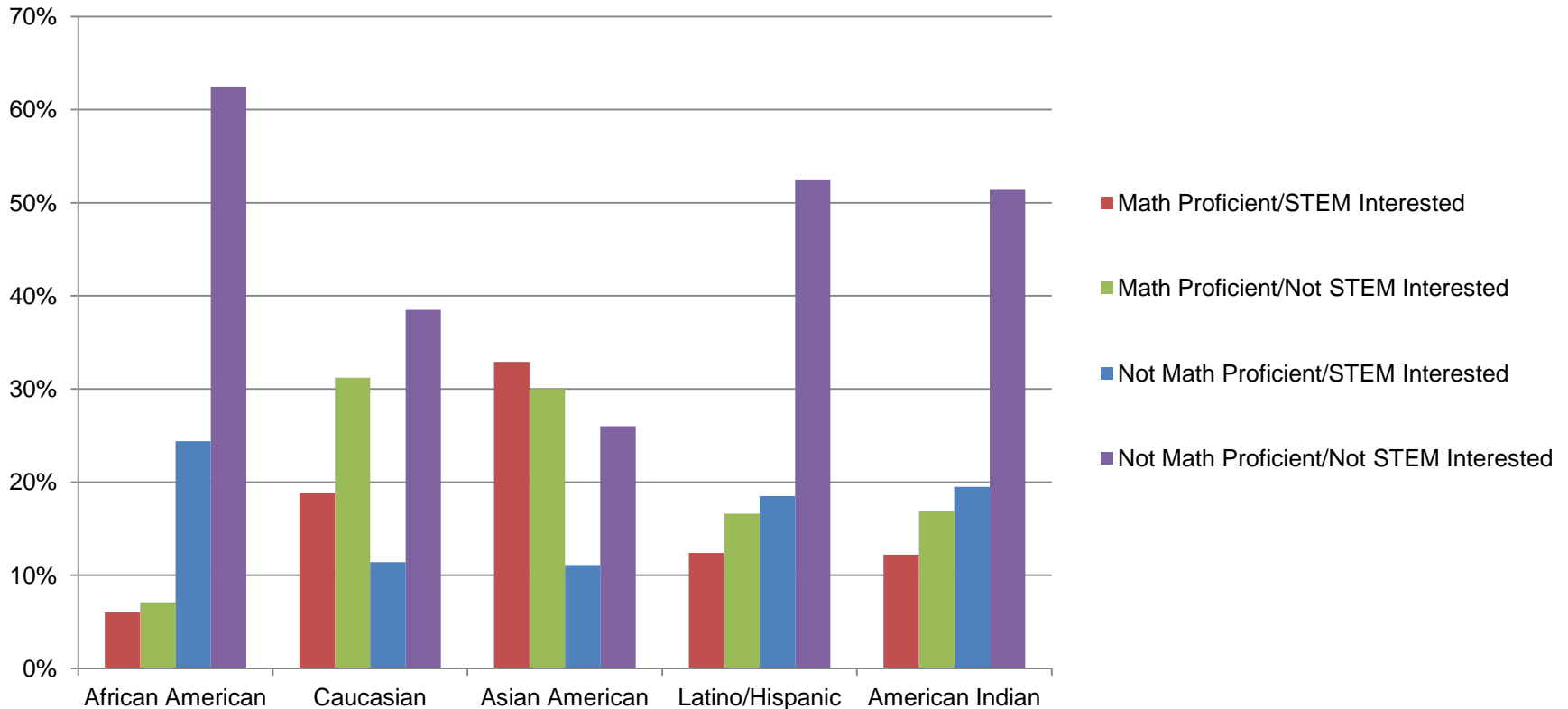
12th Grade Student STEM Interest and Math Proficiency



SOURCE: The Business-Higher Education Forum. (2011). *The STEM interest and proficiency challenge: Creating the workforce of the future.*

The Talent Pipeline – U.S. H.S. STEM Interest by Race

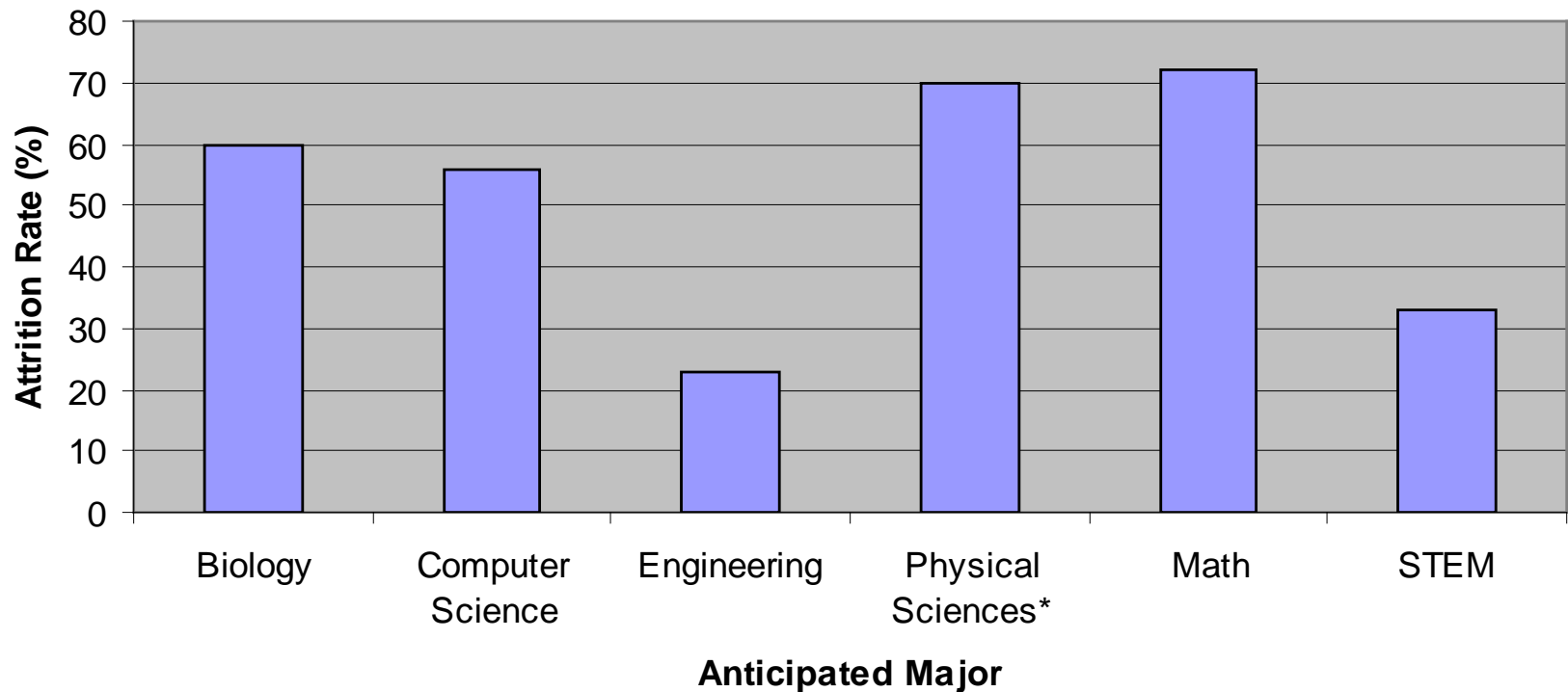
The threat to our nation's competitiveness is even more apparent when we analyze 12th graders math proficiency and interest in STEM by race/ethnicity.



SOURCE: The Business-Higher Education Forum. (2011). *The STEM interest and proficiency challenge: Creating the workforce of the future.*

The Talent Pipeline – STEM Attrition in Postsecondary

Once those students enroll in college, undergraduate STEM attrition by major is also substantial.

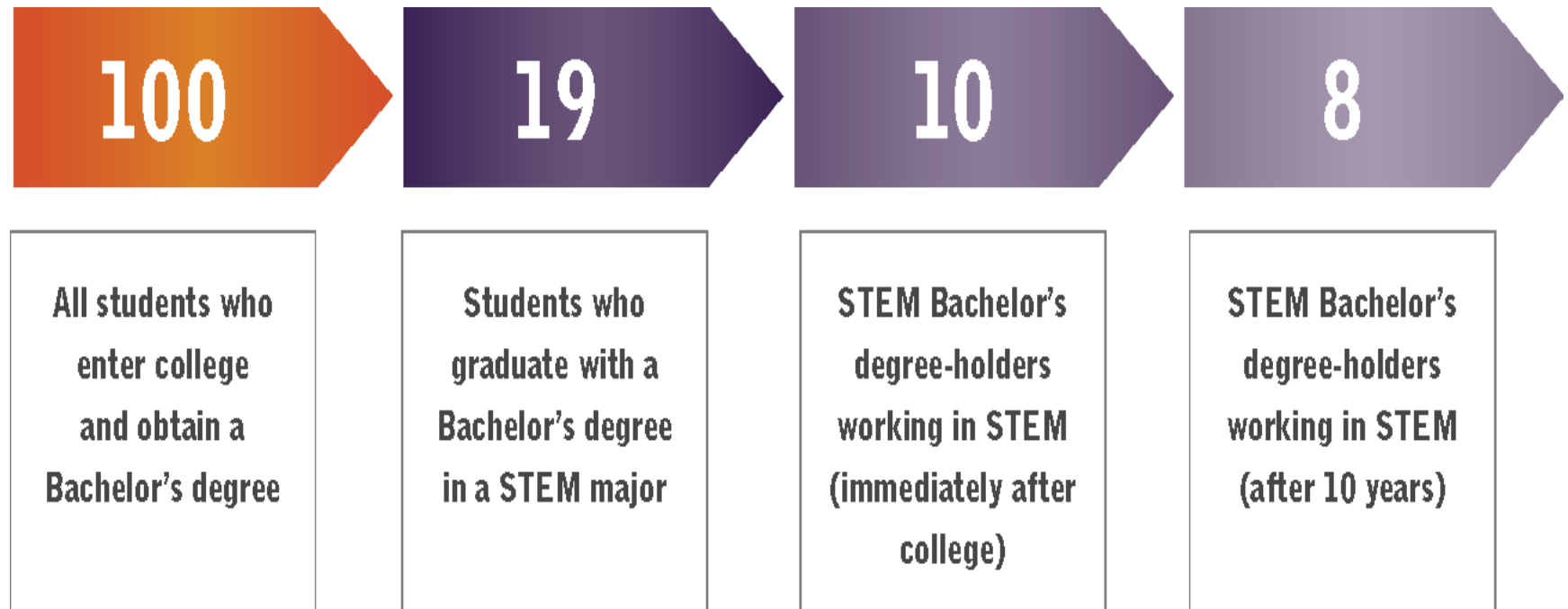


*includes Chemistry, Physics, Earth and Planetary Sciences

SOURCE: Koff, R., Molter, L., & Renninger, K.A. (2009). *Why Students Leave STEM Fields: Development of a Common Data Template and Survey Tool*. A report to the Alfred P. Sloan Foundation.

The Talent Pipeline – STEM Transitions to Employment

Only about half of STEM college graduates choose to work in STEM careers upon graduation.



SOURCE: Carnevale, T. (2011). *The STEM Workforce*. Presentation to the PCAST Working Group on STEM Higher Education, April 15, 2011.

The Talent Pipeline – Summary

- The vast majority of job opportunities in the future will require some level of postsecondary education or training.
- However, our current talent pipeline is stagnating in terms of high school completion and is facing high attrition rates in postsecondary education.
- In addition, the talent pipeline is compromised further by lack of equity by age and race with significant regional inequities.
- Finally, the system is not only failing to produce enough credentials by level, both those credentials attained are not aligned with where economic growth is anticipated to occur.

Promoting Career Readiness through the Illinois Pathways Initiative

IL Pathways Initiative – Background

- “...a narrowly defined “college for all” goal – one that does not include a much stronger focus on career-oriented programs that lead to occupational credentials-seems doomed to fail” – *Pathways to Prosperity*
- Illinois needs a college and career readiness strategy where all residents have access to high quality degree and credential opportunities that prepare them for the jobs of the present and the future.
- Illinois needs to increase the number of people with quality degrees and credentials with a particular emphasis on high need areas and those that align with the state’s economic development objectives.

IL Pathways Initiative – Background

- STEM Learning Exchanges were first advanced as part of the State of Illinois' Round 1 and 2 Race to the Top proposals as a college and career readiness strategy for STEM education.
- They were designed to build off of best practices and partnerships developed under ISBE's and ICCB's innovative career and technical education programs.
- While Illinois was not selected as a Race to the Top state, the need for reform persists. Public and private partners continued to convene and collaborate to advance the Illinois Pathways Initiative, including the scaling-up of P-20 STEM Programs of Study and the formation of STEM Learning Exchanges.
- The P-20 Council's College and Career Readiness Committee recently adopted a framework that identifies the continuing need to develop a new, public-private infrastructure for employer engagement and partnership.
- The Illinois Pathways Initiative provides a strategy to help achieve the P-20 Council's goal of 60 percent of all Illinois residents attaining a high-quality academic degree or industry recognized certificate or credential by 2025.

IL Pathways Initiative – P-20 STEM Programs of Study

Promote models that are designed to: 1) improve academic achievement, 2) increase graduation rates, and 3) improve transition rates to postsecondary education and employment...

Defining P-20 STEM Programs of Study

“P-20 STEM Programs of Study are a sequence of courses and applied learning experiences organized around a career cluster where students pursue their academic and career interests starting from an orientation experience and continuing through advanced pathway courses where there are opportunities to connect to professional networks through work-based learning experiences as well as opportunities to earn stackable credentials.”

IL Pathways Initiative – P-20 STEM Programs of Study

Scale-up Programs of Study starting in nine STEM application areas with alignment and articulation to post-secondary institutions and career opportunities.

- A model for restructuring high schools that focuses on college and career readiness and 21st century skills through adoption of the Common Core aligned curriculum.
- Expands the Program of Study model developed under the leadership of the Illinois State Board of Education's and Illinois Community College Board's Career and Technical Education programs.
- Enables students to choose a focused P-20 Program of Study related to their academic or career interests that includes a fully articulated curriculum across secondary and postsecondary education.
- Improves access and success for underrepresented populations in STEM fields such as women, minorities and low-income students.
- Promotes public-private partnerships between schools, communities, and business and industry.

IL Pathways Initiative – P-20 STEM POS Clusters

Nine STEM Programs of Study—consistent with the National Career Cluster Framework—are identified in the RTTT application and will be supported by STEM Learning Exchanges (Note: Energy is a new cluster to be explored).

1. **Agriculture, Food and Natural Resources:** development, production, processing, distribution, of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources;
2. **Energy:** developing, planning and managing the production of energy including renewable energy and clean coal technology and its distribution through smart grid technologies;
3. **Manufacturing:** product and process development and managing and performing the processing of materials into intermediate or final products and related support activities;
4. **Information Technology:** designing, developing managing, supporting and integrating hardware and software system;
5. **Architecture and Construction:** designing, planning, managing, building, and maintaining the built environment including the use of green technologies;
6. **Transportation, Distribution and Logistics:** planning, management and movement of people, materials and goods across all transportation modes as well as maintaining and improving transportation technologies;
7. **Research and Development:** scientific research and professional and technical services including laboratory and testing services, and research and development services;
8. **Health Sciences:** planning, managing and providing therapeutic, diagnostic, health informatics, and support services as well as biomedical research and development; and
9. **Finance:** securities and investments, business finance, accounting, insurance, and banking services.

IL Pathways Initiative – P-20 STEM POS Components

- **Personalization** - Assists teachers, parents, students, and counselors in creating personalized plans of study for a diverse student body that builds a P-20 portfolio.
- **Applied Learning** - Real-world skills and connections to career pathways through applied learning and access to a continuum of work-based learning opportunities.
- **College & Career Readiness Assessments** - Measured through a network of assessments, including 1) academic, 2) employability, and 3) pathways.
- **Broad Orientation** - Courses that introduce students to one or multiple clusters based on common foundational skills, e.g. Technology Orientation.
- **Shared Pathways** - Shared pathways across cluster areas to enable personalization of learning, build capacity and reduce switching costs.
- **Early College** - In advanced pathway courses students earn dual credit, advanced placement and articulated credit to improve transitions and reduce cost.
- **Diverse Delivery System** – Builds program capacity through academic core, CTE courses, electives, regional centers, virtual courses, and college courses.

P-20 STEM Program of Study: Key Features

**Elementary
and Middle
School**



**Secondary
Education
9th and 10th**



**Secondary
Education
11th and 12th**



**Postsecondary
Education and
Careers**

- **Grades P-6: Build STEM skills through authentic learning experiences.**
 - **Grades 7-8: Career development and Explore assessment which assist with educational plan based on academic and career interest.**
-
- **Strong focus on orientation level courses and career development.**
 - **Common course infrastructure across multiple pathways.**
 - **Assessments that measure academic, employability and pathway skills.**
 - **Work-based learning as central part of program completion.**
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- **Students begin college-level work in pathways by junior year, e.g. dual credit, advanced placement and articulated credit.**
 - **Coordination with adult bridge programs.**
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- **Transitions and credit articulation as part of pathway progression.**
 - **Portfolio through completing degree programs, attaining stackable credentials, and building lifelong and lifewide professional network.**

P-20 STEM Program of Study: Design

Grade	Core Curriculum	Electives	Program of Study Pathway Courses	Work-Based Learning
Elementary and Middle School	EXPLORE Assessment and Education Plan Development			Career Awareness and Exploration
Secondary Education 9 th and 10 th	Required English, Language Arts, Math, Science, Social Science, and Physical Education Courses	Recommended Science, Social Science, Humanities, Art, and Foreign Language Courses	Orientation Level Courses across Multiple Career Pathways	Career Workshop, Mentor, Job Shadow
Secondary Education 11 th and 12 th			Placement Exam for Dual Credit Courses: COMPASS and PLAN	Mentor, Job Shadow, Internship, Sponsored PBL Challenge
Post-Secondary Education and Careers			Focused Career Pathway Development – Academic and CTE Courses	Mentor, Internship, Sponsored PBL Challenge
Continuation of Career Pathway Development and Acquisition of Stackable Credentials (i.e. Certifications and Certificates/Degrees)				

P-20 STEM Program of Study: Pathway Courses

Grade	Program of Study Pathway Courses		
Secondary Education 9 th and 10 th	Broad Orientation Courses across Clusters (e.g. Technology Orientation: Man, TDL, IT, A&C, and Energy)		
Secondary Education 11 th and 12 th	Placement Exam for Dual Credit Courses: COMPASS and PLAN		
	Shared Pathways and Early College Courses		
	Individual Pathway Courses (e.g. Production Process Development; Man)	Common Pathway Courses within Cluster (e.g. Logistics & Operations; TDL)	Shared Pathway Courses with other Clusters (e.g. Facility and Mobile Equipment Maintenance; Man & TDL)
Post-Secondary Education and Careers	Broad Diversification of Courses and Majors aligned to a Pathway	Broad Diversification of Courses and Majors across Multiple Pathways within a Cluster	Broad Diversification of Courses and Majors across Multiple Clusters

P-20 STEM Program of Study: Manufacturing Pathway Courses

Grade	Program of Study Pathway Courses			
Secondary Education 9 th and 10 th	<p style="text-align: center;">Technology and Engineering Orientation Courses</p> <ul style="list-style-type: none"> • PLTW Intro to Engineering Design and Principles of Engineering • Engineering by Design Foundations of Technology and Technological Design • Proposed Principles of Technology I and II (with industry applications) (MSSC CPT – Safety and MSSC CPT – Quality Practices and Measurement) 			
Secondary Education 11 th and 12 th	Placement Exam for Dual Credit Courses: COMPASS and PLAN			
	Production Process Development	Production	Automation	Logistics and Inventory Control
	<ul style="list-style-type: none"> • Engineering Tech I <ul style="list-style-type: none"> - PLTW: Digital Electronics - EbD: Advanced Technical Design • Engineering Tech II <ul style="list-style-type: none"> - PLTW: Computer Integrated Manufacturing - EbD: Advanced Technical Application 	<ul style="list-style-type: none"> • Manufacturing I <ul style="list-style-type: none"> - Precision Machining I (NIMS) - Welding I (AWS) - Manufacturing Technology I (MSSC) • Manufacturing II <ul style="list-style-type: none"> - Precision Machining II (NIMS) - Welding II (AWS) - Manufacturing Technology II (MSSC) 	<ul style="list-style-type: none"> • Automation I (MSSC CPT – Maintenance Awareness & MSSC CPT MFG Processes and Production) <ul style="list-style-type: none"> - Industrial Maintenance I - Mechatronics • Automation II (MSSC CPT – Maintenance Awareness & MSSC CPT MFG Processes and Production) <ul style="list-style-type: none"> - Industrial Maintenance II - Robotics 	<ul style="list-style-type: none"> • Logistics and Warehousing Operations I <ul style="list-style-type: none"> - MSSC-Certified Logistics Associate - Other • Logistics and Warehousing Operations II <ul style="list-style-type: none"> - MSSC-Certified Logistics Technician - Other

IL Pathways Initiative – Technology Orientation

- *Proposed* - The MFG, TDL, IT, A&C and Energy pathways will have a shared Technology Orientation course in the 9th and 10th grades, in addition to options available through PLTW and Engineering by Design.
- The Technology Orientation course would involve the integration of two long-standing initiatives in Illinois – 1) Principles of Technology, and 2) the Illinois Plan for Technology Education.
- Will feature strong applied science and math foundations with industry applications across four cluster areas.
- Students will learn the fundamentals of mechanical systems, fluid power, electrical power, and thermal systems and have opportunities to demonstrate their knowledge through labs, experiments, and problem-based learning.
- Students will also have opportunities to earn industry-recognized credentials. MSSC CPT - Safety and MSSC CPT - Quality Practices and Measurement are certifications that are embedded as part of Principles of Technology I and II, respectively.

IL Pathways Initiative – Automation Pathway

- *Proposed* - Automation is a shared pathway for MFG, Energy, A&C, IT and TDL.
- The Automation course sequence would provide an integrated approach to automation and a strong foundation in underlying concepts and principles in total productive maintenance.
- Mechatronics (Automation I): This course will provide students with the electrical/mechanical fundamentals as it applies to automation across five cluster areas. Topics of study include DC & AC circuits; residential and commercial wiring; mechanical and fluid power transmission; piping; fluid and electrical controls; quality assurance; and resource planning.
- Robotics (Automation II): This capstone course builds on the fundamentals of process/production automation learned in Automation I . New topics of study include digital electronics; National Electrical Code; test equipment; print reading; motors and generators; troubleshooting; programmable logic controller; etc...
- In addition, students will have opportunities to pursue applied projects in partnership with industry professionals through work-based learning experiences.

IL Pathways Initiative – P-20 STEM POS Working Groups

Work with public-private partners and stakeholders to develop Programs of Study models in priority STEM areas that will serve as implementation roadmaps.

- The goal of each working group is to develop a course sequence within a designated STEM area and provide a general model that reflects all of the P-20 components of a STEM Program of Study.
- This model is designed to establish a series of shared definitions that will support statewide networks and facilitate connections between statewide public-private partners in each of the nine areas. Components of the report include:
 - Career Profiles (Demand)
 - Baseline Analysis (Supply)
 - P-20 Course Sequence and Definition Model (Course Outline)
 - Cluster Support Resources (Best Practices)
- The final report will provide a guide for structuring the future STEM Learning Exchanges, which are charged with supporting Program of Study implementation.

IL Pathways Initiative – STEM Learning Exchanges

Support local implementation of P-20 STEM Programs of Study by developing new public-private models that reduce the transactions cost for connecting with network partners...

Defining STEM Learning Exchanges

“STEM Learning Exchanges are a new, innovative public-private education infrastructure that is organized to advance college and career readiness and support local implementation of P-20 STEM Programs of Study by coordinating statewide networks of P-20 education partners, business, labor, and other organizations on a sector-by-sector basis to coordinate planning and investment, aggregate resources, and review talent pipeline performance.”

IL Pathways Initiative – STEM Learning Exchanges

Goal: To create a new, innovative public-private education infrastructure that can advance college and career readiness in STEM disciplines by coordinating statewide networks of P-20 education partners, business, labor, and other organizations based on career clusters.

- Learning Exchanges are designed to support local implementation of P-20 STEM Programs of Study where students can pursue programs that connect to their academic and career interests.
- Learning Exchanges coordinate nine functions; including planning, resource sharing, connections to professionals, managing transitions, and evaluation of results.
- A separate Learning Exchange is planned for each of the nine STEM areas, which align with the state's economic development objectives.
- To be hosted on the proposed cloud computing-based Learning and Performance Management System (LPMS) as a web-based portal linked to shared data systems.
- DCEO is currently working with ISBE to identify how Race to the Top Round 3 can support the formation of the first round of Learning Exchanges.

IL Pathways Initiative – Learning Exchange Members

Who makes up a STEM Learning Exchange?

- Employers and employer-led organizations
- Labor unions
- Professional associations
- Secondary and postsecondary teachers and faculty
- Students and student organizations
- Community colleges
- Universities
- School districts and local education agencies
- State government P-20 education, economic development and workforce agencies
- STEM education researchers and experts
- Federal laboratories and research centers
- Local workforce investment boards
- Museums and related non-profit organizations
- Community-based organizations serving at risk student populations and other student populations underrepresented in STEM programs of study.

IL Pathways Initiative – Learning Exchange Functions

1. **Provide e-learning curriculum resources**, including on-line courses, assessments and feedback systems, reference materials, databases, and software tools.
2. **Expand access to classroom and laboratory space, equipment, and related educational resources** necessary to support programs of study through regional partnerships and other strategies.
3. **Support student organizations and their major activities**, including conferences, internships and professional networking experiences, competitions, and community projects that build leadership, communication and interpersonal skills and provide professional and peer support networks.
4. **Provide internships and other work-based learning opportunities** that connect students with adult mentors.
5. **Sponsor challenges and project management resources** for students to work in collaborative teams addressing real-world interdisciplinary problems.
6. **Provide professional development resources for teachers and school administrators** integrated and aligned across middle school, high school, and community college instruction, including STEM externships, support for web-based networks, and integrated professional development for academic and CTE instructors.
7. **Provide career development and outreach resources** to expand awareness of STEM-related programs and careers to K-12 students.
8. Provide tools and resources to assist students and schools with implementing **personalized education plans and transitions to post-secondary academic and training programs**, including establishing course articulation and dual credit opportunities.
9. **Review performance** of STEM-related Programs of Study through performance reporting and work with partners to continuously improve performance.

Illinois Pathways Initiative

Governance Model

Illinois Pathways Interagency Committee

- Established by IGA
- Membership: DCEO, ISBE, ICCB, IBHE, ISAC, IDES
- Functions:
 - Select Learning Exchanges
 - Data sharing across education and workforce systems
 - Establish Pathways Resource Center
 - Establish Illinois Pathways Advisory Council
 - Align programs and policies to support Pathways Resource Center and Learning Exchanges
 - Coordinate with LPMS

Goal: To create a new, innovative public-private education infrastructure that can advance college and career readiness by coordinating statewide networks of P-20 education partners, business, labor, and other organizations based on career clusters.

Illinois Pathways Advisory Council

- Membership: IPIC, Learning Exchanges, P-20 Council, Business, and others
- Responsibilities:
 - Advises Agencies, Governor, and General Assembly
 - Advises Pathways Resource Center on projects
 - Submits annual talent pipeline reports and Learning Exchange benchmark reports to Governor and General Assembly
 - Plans annual STEM/Learning Exchange project sharing event

Pathways Resource Center

- One or multiple government or non-governmental entities
- Funded by Authority and submits reports to Adv Committee
- Categories of service:
 - External Outreach
 - Funding Center
 - Technology Platform
 - Performance Management

Learning Exchanges

- Membership: Broad public-private partners, including P-20 education institutions, industry, labor, museums, and community based organizations
- Selected by IPIC through submission of a 3 years strategic plan
- Submits annual talent pipeline and benchmark reports to IPAC
- Coordinates 9 Functions:
 1. E-Learning Resources
 2. Regional Resources & Assets
 3. Student Organization Supports
 4. Work-Based Learning Experiences
 5. Sponsor Challenges
 6. Professional Development
 7. Career Development
 8. Education & Career Planning
 9. Review Performance

IL Pathways Initiative – Launching Learning Exchanges

The State of Illinois plans to solicit the first STEM Learning Exchanges in the fall.

- A separate Learning Exchange is planned for each of the nine STEM application areas, though priority will be given to areas based on the following:
 - Completion and support of statewide P-20 Program of Study framework;
 - Economic development potential and need;
 - District survey results;
 - Statewide public-private partner readiness; and
 - Funding availability
- Strategic review process:
 - Establish the organizational structure of the Learning Exchange, including a fiscal agent.
 - Identify and recruit steering group representatives.
 - Develop a three year strategic plan and budget to carry out the nine major functions of a STEM Learning Exchange through the 2012-15 school years.
 - Develop a sustainability plan for continued operations beyond 2012-15 that aligns with permanent governance structure.

Questions & Discussion