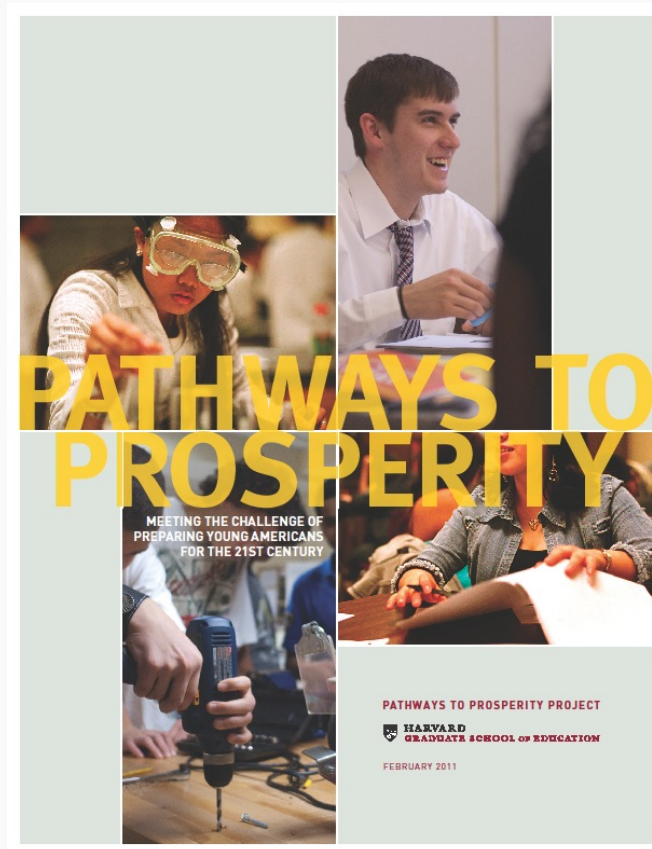


**Pathways to Prosperity:
Meeting the Challenge of Preparing Young
Americans for the 21st Century**

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Agenda

- **The Challenge Facing the U.S.**
- **A More Demanding Labor Market**
- **Our Failure to Meet the “College for All” Goal**
- **Why are we failing to prepare so many Young Adults?**
- **Lessons from Abroad**
- **The Road to an American Solution**
- **The Implications for Technology Centers**

What is the Pathways Challenge?

The United States is increasingly failing to prepare young people to lead successful lives as adults:

- We have lost our global leadership in educational attainment and achievement
- Teen and young adults (20-24) are increasingly unable to find work
- The transition to adulthood is far longer

A More Demanding Labor Market

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

Source: Center on Education and the Workforce, Georgetown University

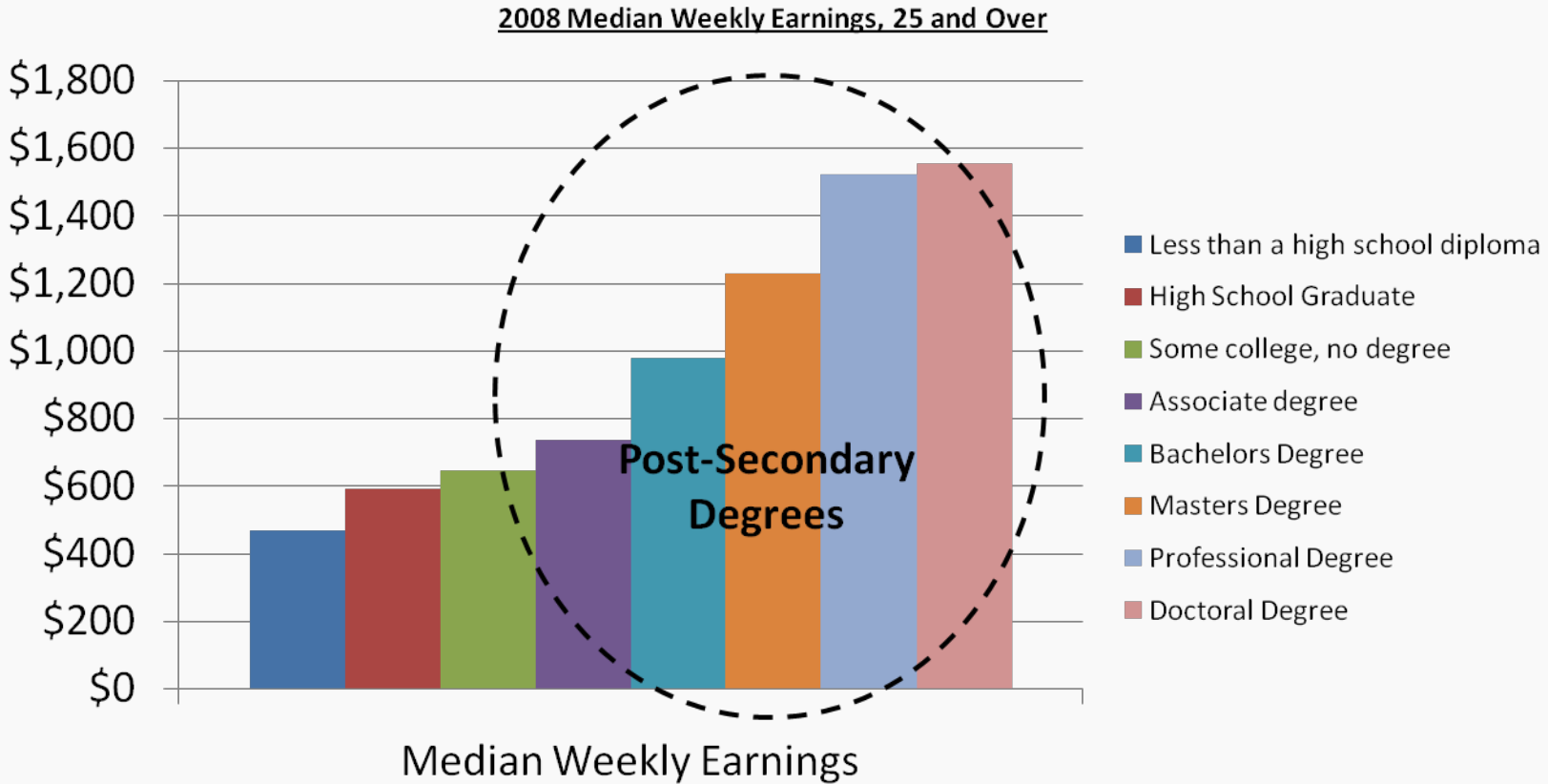
Today's Reality: PSE Credential is the New Passport

Post-secondary education (PSE) is necessary to compete in the global economy in 2010 and beyond:

- 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 over this period
- Workers with a HS education or less now make up just 41% of workforce, as compared to 72% in 1971

Source: Center on Education and the Workforce

On Average, PSE leads to Much Higher Earnings



Note: All numbers in '000s. With respect to the difficulty of these projections, Osterman notes: "The projections are directionally accurate and for the large occupations tend to be within 10 percent or so of reality" (p. 12)

Source: BLS

PSE Will Be Even More Important Tomorrow

Economic forecasters widely agree that these trends will continue

For example, the Georgetown Center on Education and the Workforce forecasts:

- 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 PSE degrees by 2018, but we are likely to fall short

PSE Does Not Always Mean A B.A. Degree

Even Georgetown Study concedes that most jobs will not require a B.A.

For the next 47 million job openings:

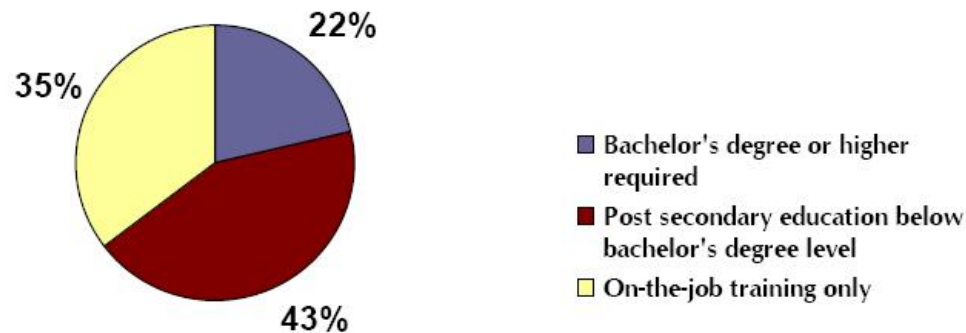
- 36% will require a HS degree or less
- 30% will require some college/ AA degree
- 33% will require a B.A. or better

Many Healthcare Jobs Require Less Than a B.A.

In the fast-growing healthcare sector, over 78% of jobs require less than a B.A.

Training Requirements for Healthcare Occupations:
Percent of Trained Workers Required by Training Level for
Projected National Workforce Increase 2004 – 2014

Healthcare Occupation Training Requirement	Percent	Number
First professional degree	5.5	165,000
Doctoral degree	0.3	9,000
Master's degree	5.7	170,000
Bachelor's or higher degree, plus work experience	2.6	79,000
Bachelor's degree	7.4	222,000
Associate's degree	27.4	823,000
Postsecondary vocational training	15.6	468,000
High school + moderate-term, on-the-job training	10.8	325,000
High school + short-term, on-the-job training	24.6	737,000



Source: Health Careers Futures/Jewish Healthcare Foundation, *Health Careers Pathways Study* (2008)

What is the right goal for the U.S.?

“College for All” needs to be broadened to mean a meaningful “post-high school credential” for all

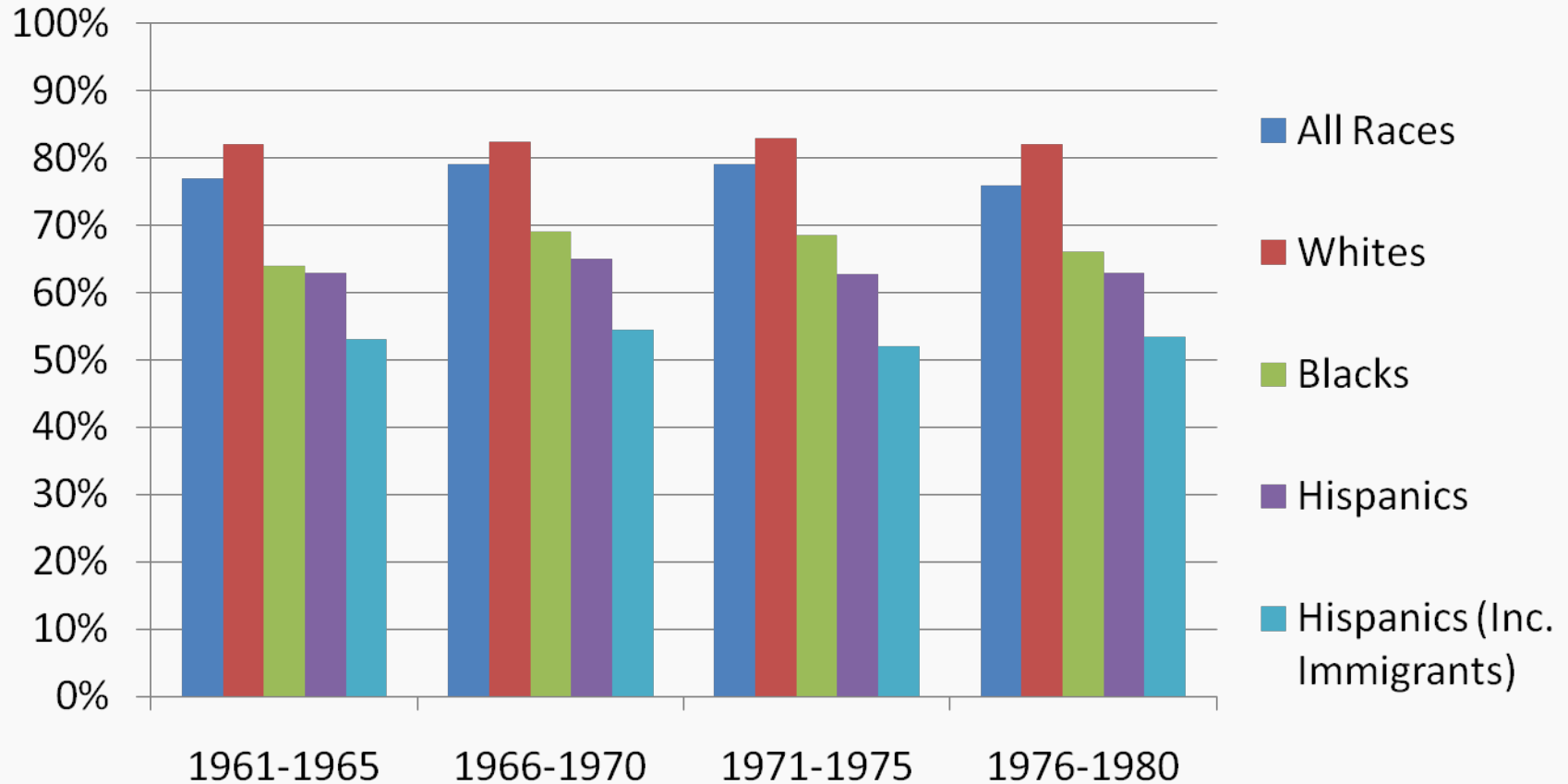
A meaningful credential can be earned in many ways:

- Community college
- Apprenticeships
- The military/community service
- Four year college

Stagnant High School Graduation Rates

Despite two decades of reform, H.S. graduation rates have not changed much since the 1980s

High School Graduation Rates by Race and Birth Cohort

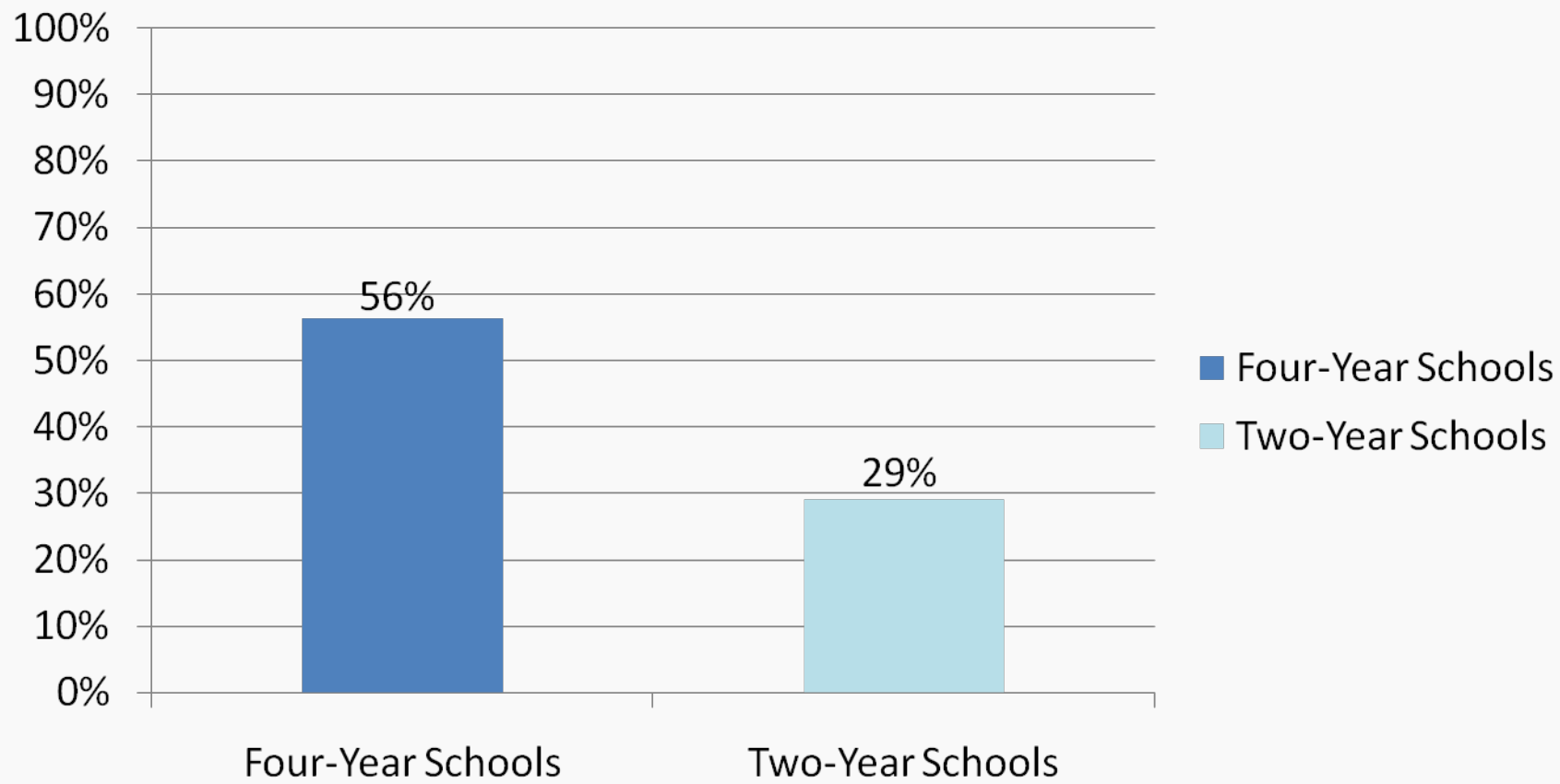


Note: Does not include GED recipients. Unless indicated, does not include recent immigrants. Rates are for age group of 20-24 or 25-29 dependant on their age at the time of census

Source: Heckman and LaFountaine (2007), U.S. Census data, and other sources

Dismal Graduation Rates at Two-Year Institutions

Graduation Rates of Two and Four-Year Programs, 2006

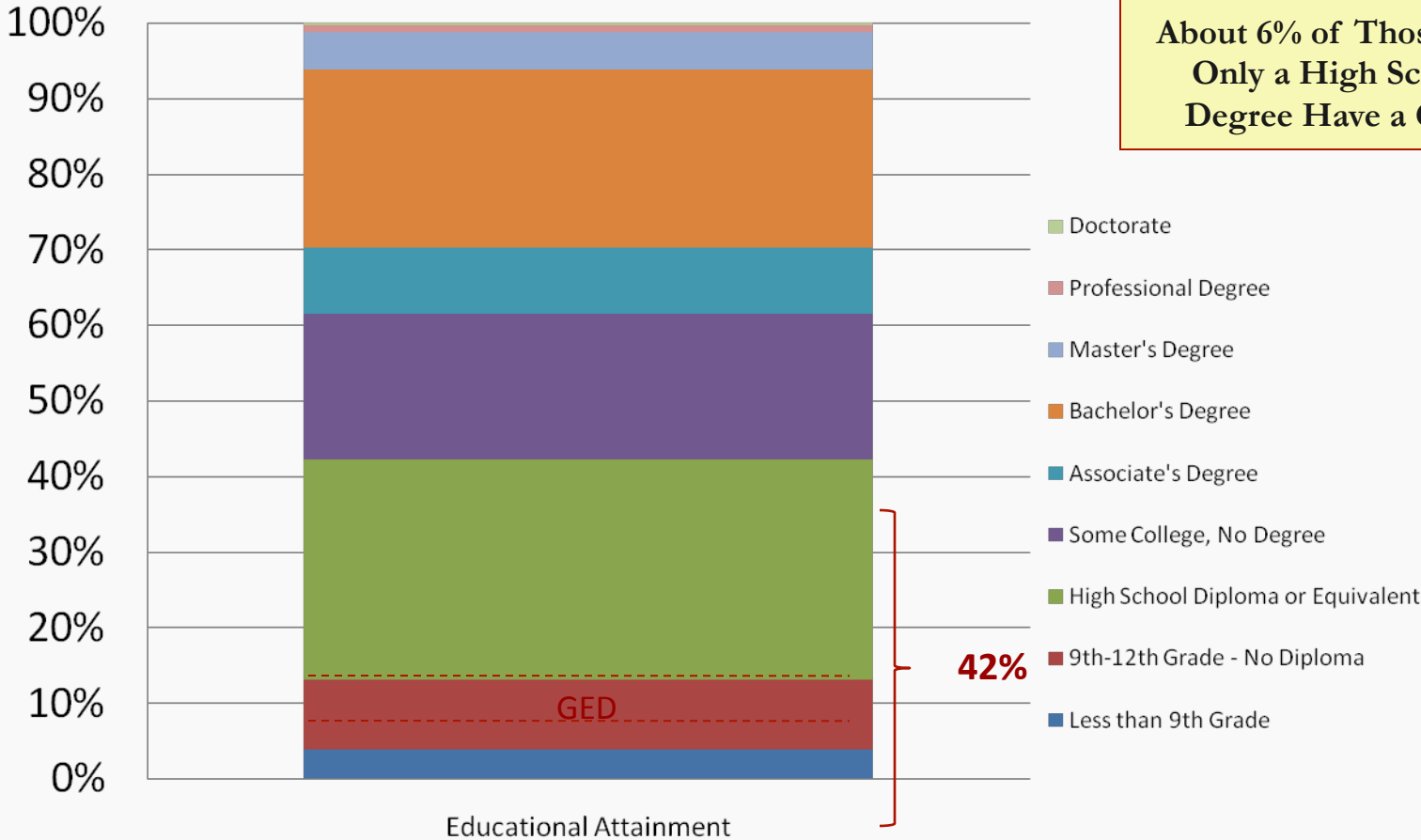


Note: Two-year schools have a three year graduation window. Four-year schools have a six-year window

Source: Higher Ed Info – NCES/IPEDS Graduation Survey

Most Students Still Do Not Earn a College Degree

Educational Attainment, by Age 26-27

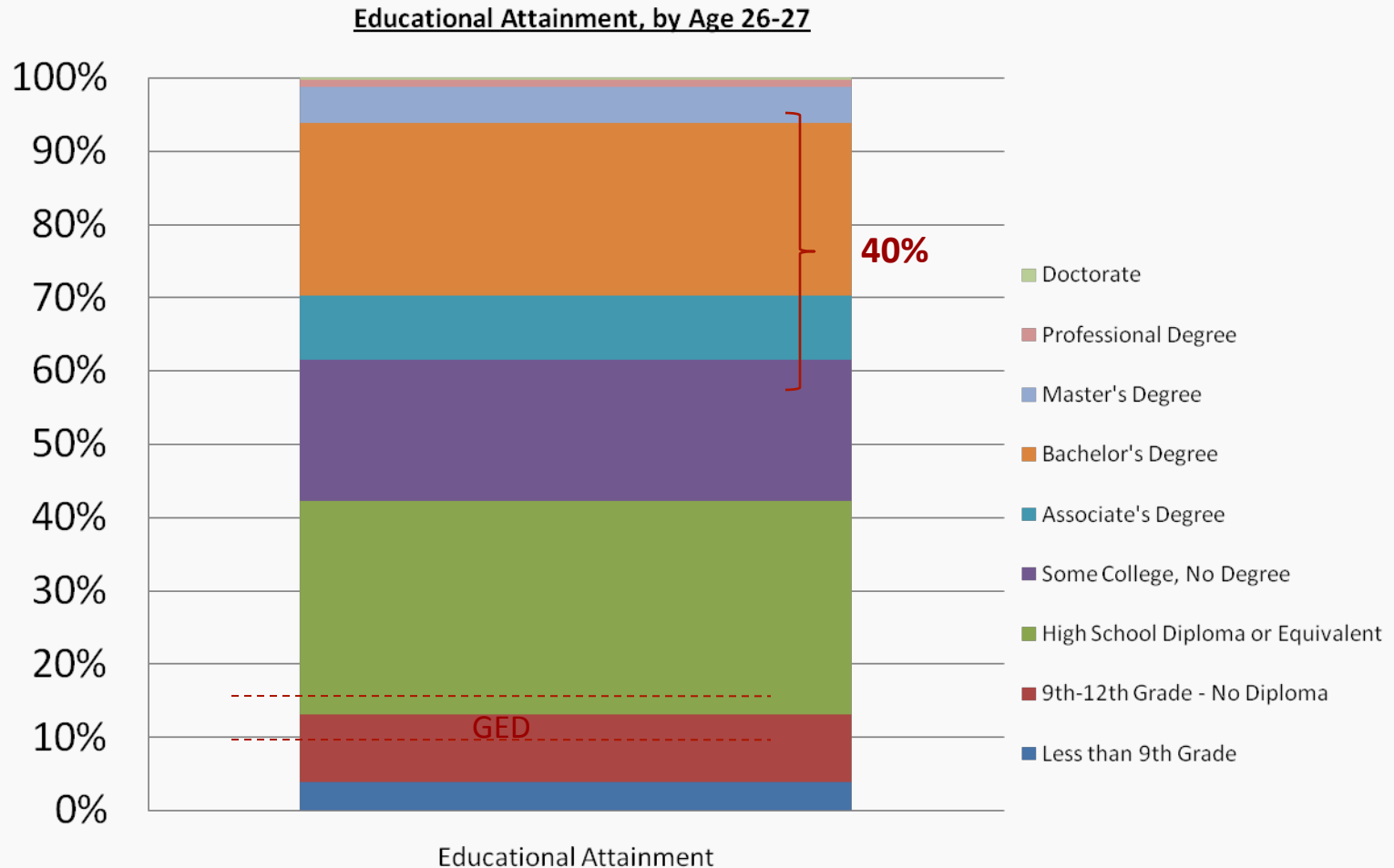


About 6% of Those with Only a High School Degree Have a GED

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

Source: US Census - Current Population Survey (CPS) Annual Social and Economic Supplement, 2006-2008; GED Testing Program

By Age 27, Only 40% Have At Least an A.A. Degree

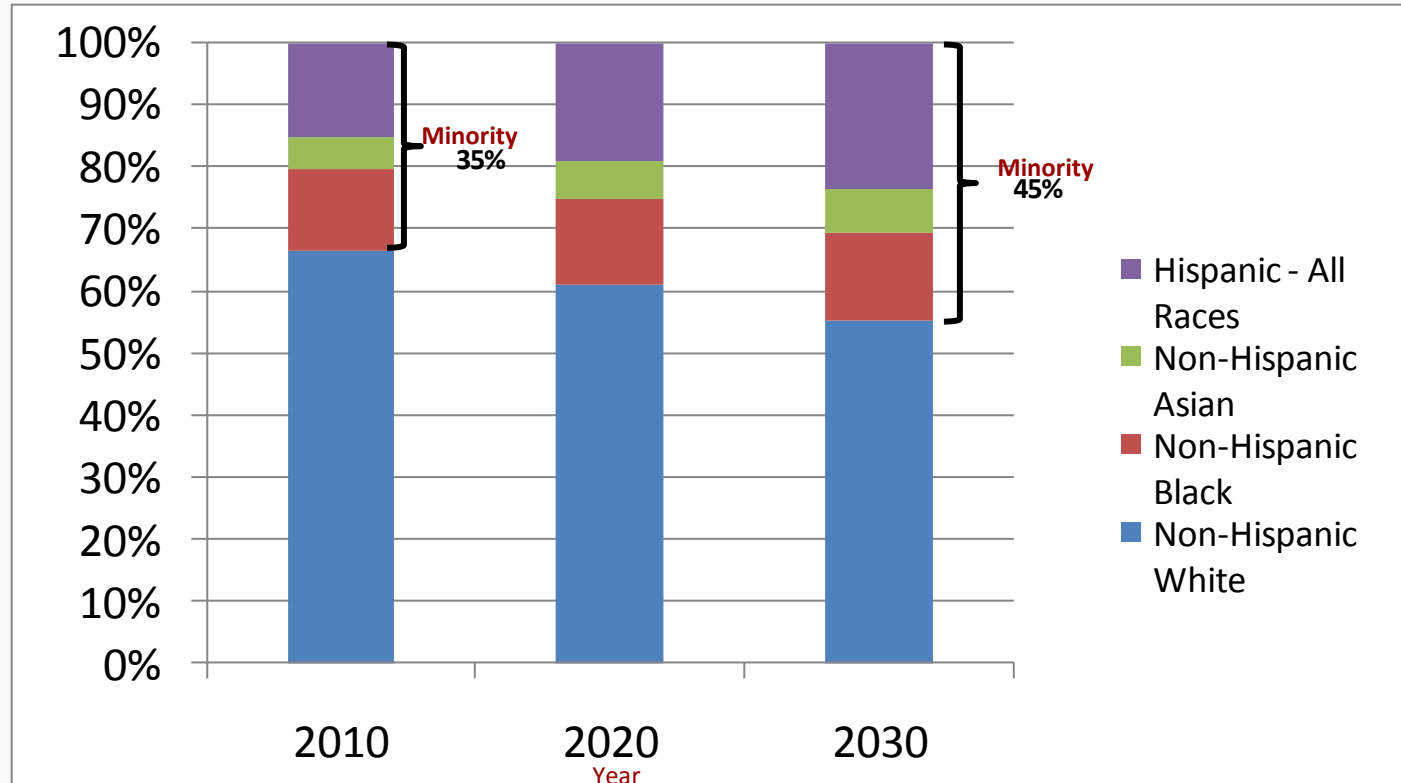


Note: Represents data collected in surveys between 2006-2008; GED is approximation based on data from GED Testing Program

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The Demographic Dilemma

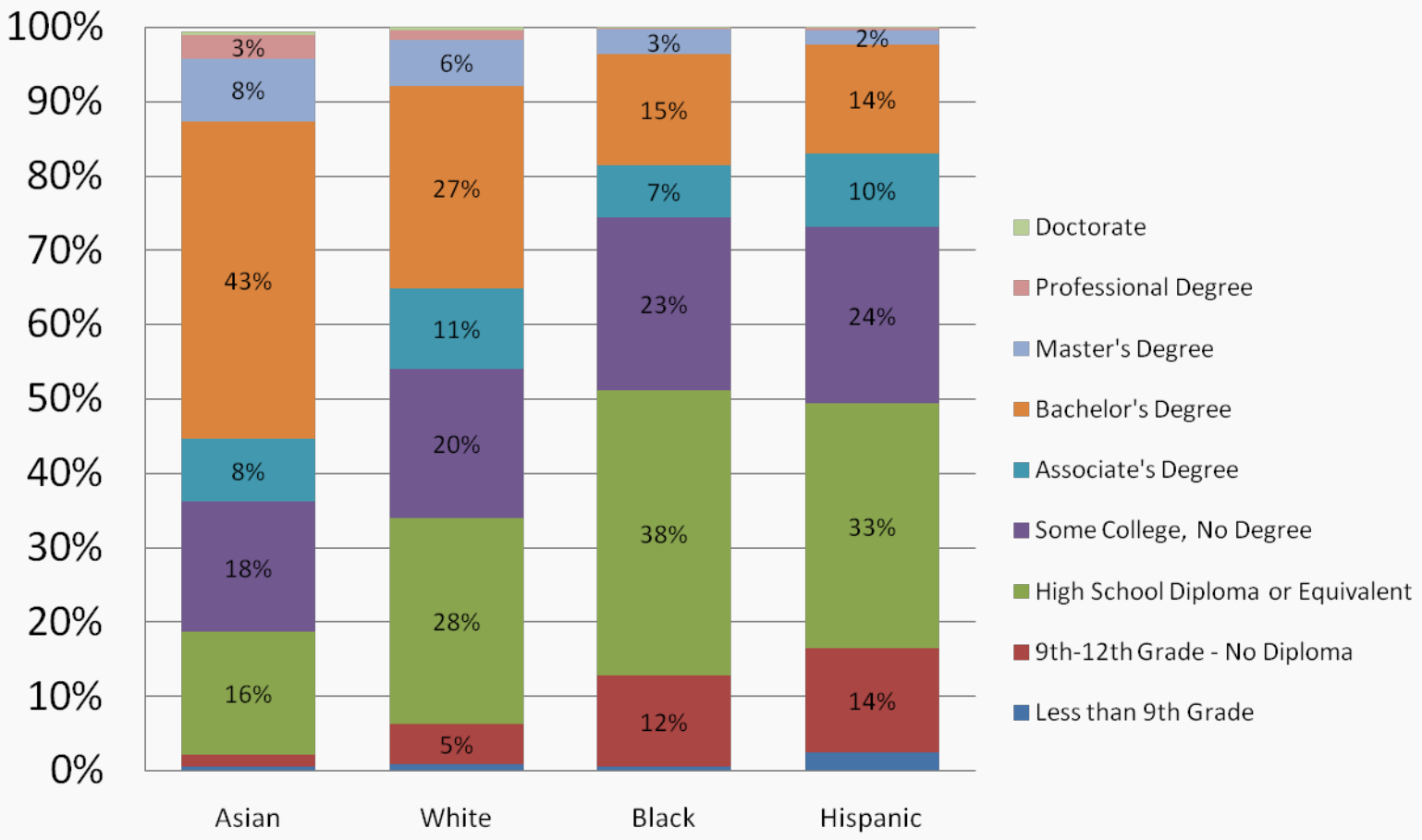
Hispanics are expected to become a much larger part of the working age population in the coming decades



Source: US Census, Projections

But Because Attainment Differs by Race

Educational Attainment, For Ages 25-30

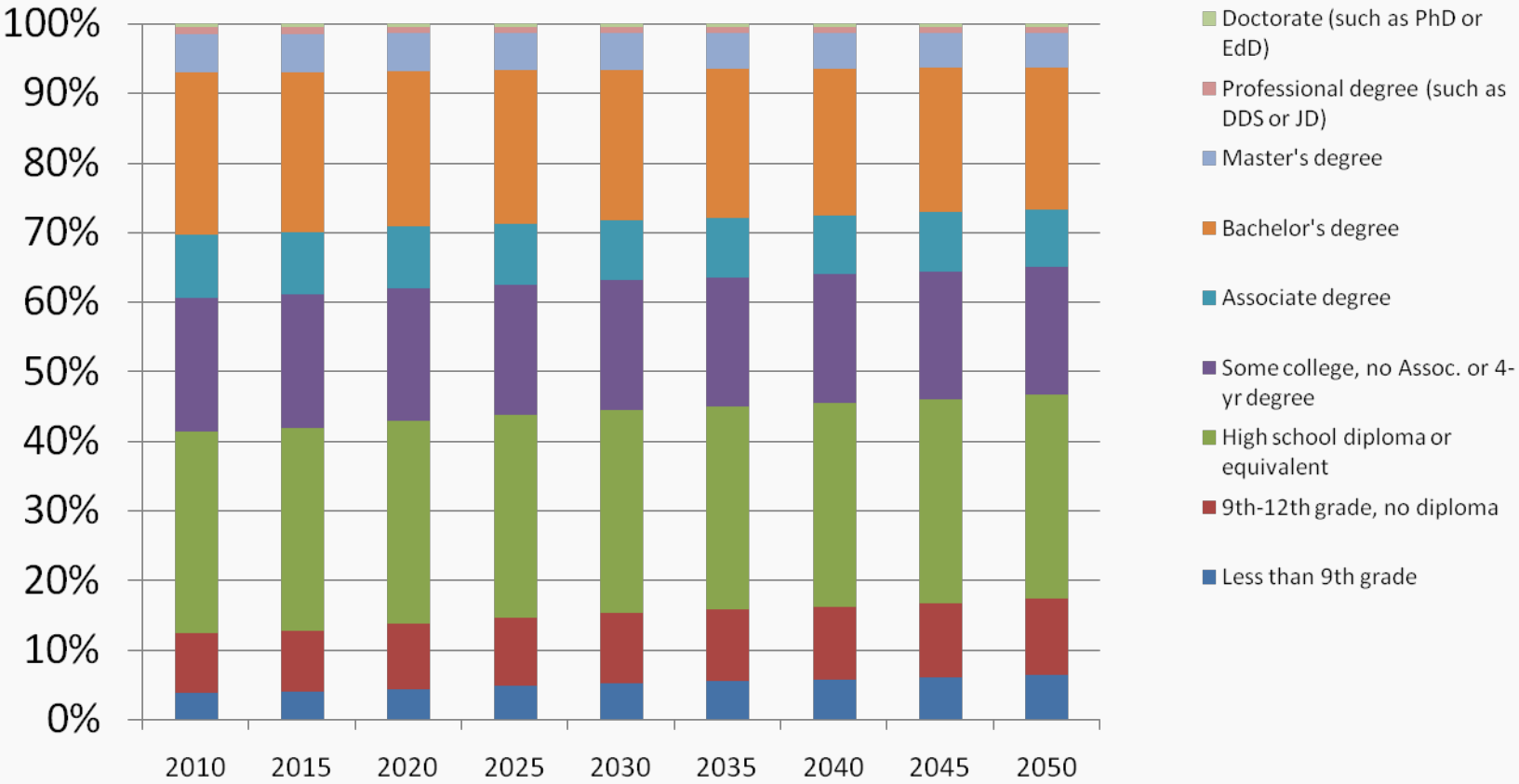


Note: Represents data collected in surveys between 2006-2008; Includes Native Born only

Source: US Census, Current Population Survey (CPS) Annual Social and Economic Supplement, 2006-2008

Attainment May Fall for First Time in History

Educational Attainment, Projections



Note: Assumes constant educational attainment growth; Includes Immigrants and Native Populations

Source: US Census Projections; Author Calculations

The Growing Skills Gap

U.S. Employers increasingly complain that young adults lack “21st Century Skills”:

- “Are They Ready To Work?” Report
- Partnership for 21st Century Skills
- Tony Wagner’s “Seven Survival Skills”

What Young People Need to Succeed

Three Lenses For Answering this Question:

- College Readiness
- Healthy Youth Development
- Workforce Readiness

The Crisis in Youth Employment

Teen employment:

- **Has Plunged to lowest levels since the Great Depression**
- **Low-income and minority teens have been hit hardest**

Young Adult (20 to 24) employment:

- **Have been hit far harder than older adults**

The Growing Gender Gap

- **Women now account for 57% of college students, and 60% of graduate students**
- **Men earn just 43% of college degrees**
- **What are these implications?**

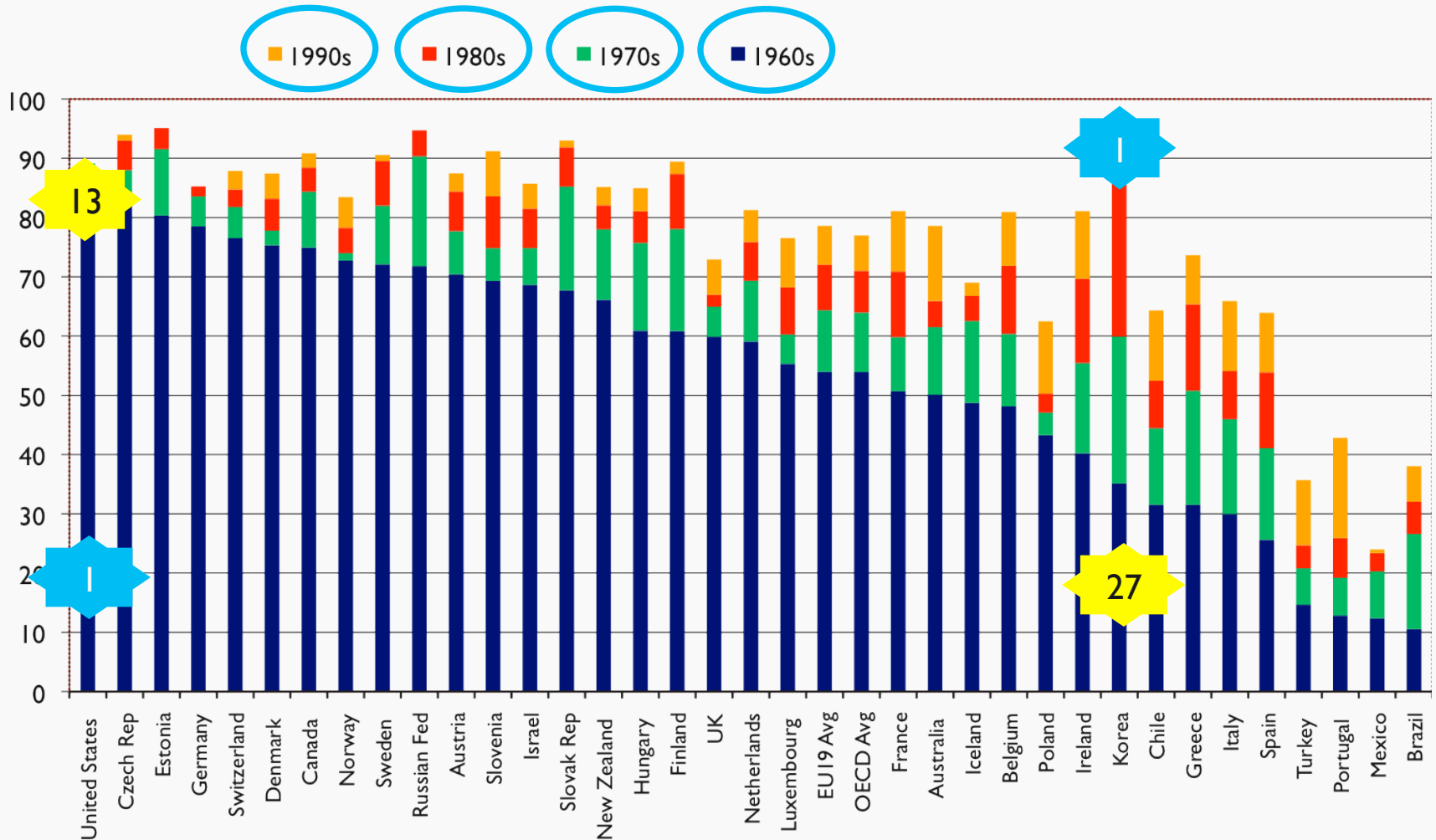
Why Are We Failing To Prepare So Many Youth?

- **Our focus has been too narrow**
- **The transition to adulthood has changed radically, but our system has not evolved**
- **We need a broader, more holistic system of Pathways to Prosperity**

Lessons from Abroad

Dramatic change in global H.S. Graduation Rates

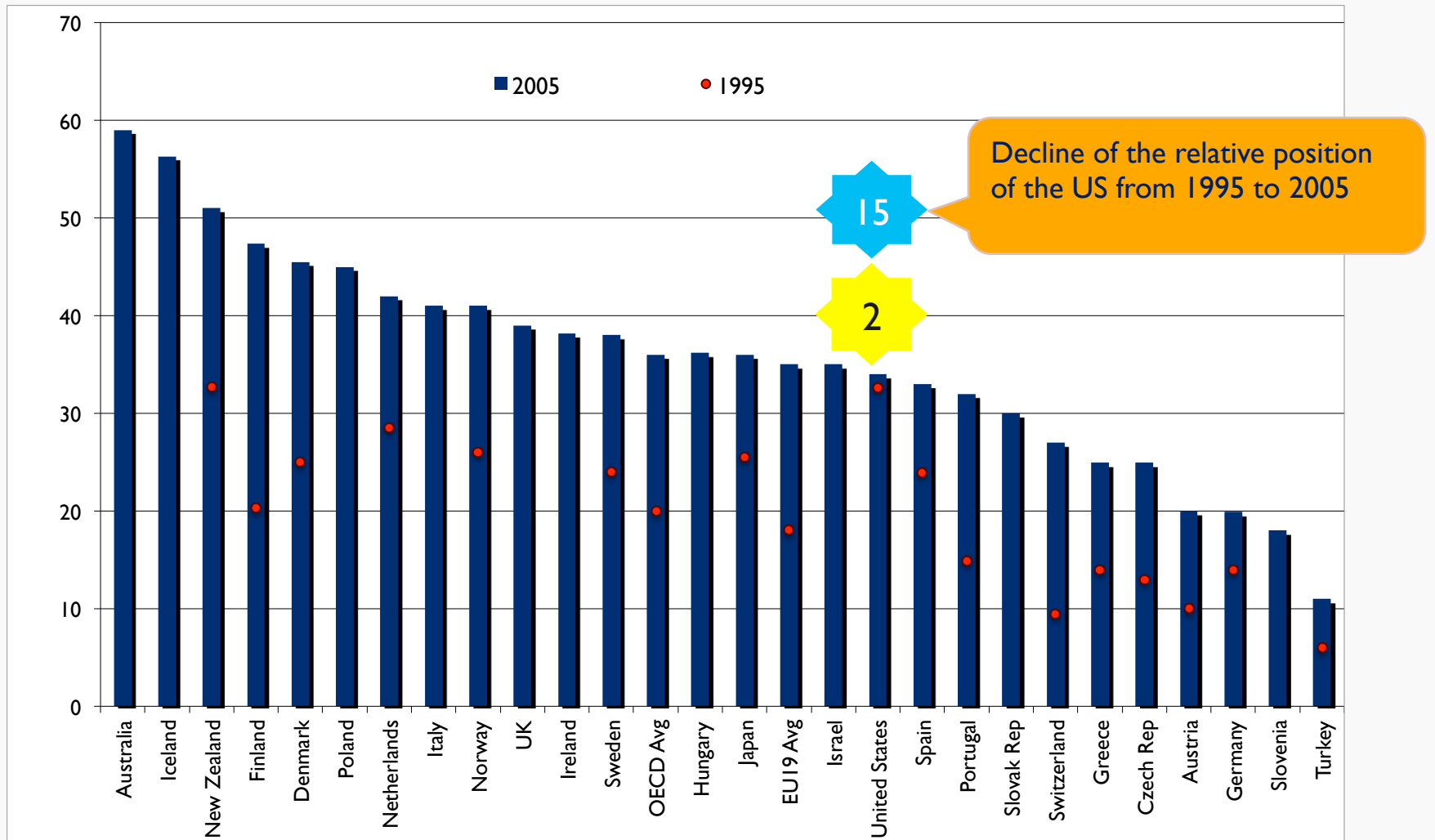
U.S. has stagnated while other countries have improved



Source: Schleicher (2007) based on OECD data. Approximated by percentage of persons with high school or equivalent qualifications in the age groups 55-64, 45-55, 35-44, and 25-34 years

Global College Graduation Rates

U.S. has stagnated while other countries have improved



Source: Schleicher (2007) based on OECD data. Percentage of tertiary type A graduates to the population at the typical age of graduation.

Why Are Other Countries Surpassing the U.S.?

- The key role of Vocational Education
- The OECD's "Learning for Jobs Report:
Reviewed VET (Vocational Education Training in
17 Countries

Upper-Secondary Students Pursuing VET

- **Germany: 60%**
- **Switzerland: 65%**
- **Netherlands: 66%**
- **Austria: 70%**
- **Australia: 60%**
- **Britain: 40%**

Note: Figures are approximate

Variations in VET By Country

The Dual-Apprenticeship Model:

- Germany
- Switzerland
- Denmark
- Austria

School-based model:

- Australia
- Sweden

The Case for Vocational Education Training

Pedagogical

- Best way for many young people to learn
- Apprenticeships support developmental needs of young people

Higher attainment

- Many countries with best VET systems surpass the U.S.

Finding work

- Facilitates transition to labor market

The Bottom Line

- **The U.S. is increasingly an outlier on vocational education**
- **We can use the principles and practices of the best VET systems to develop an improved American approach**

The Road to an American Solution

Three Core Elements of the Pathways System

1. **Multiple Pathways**
2. **An Expanded Role for Employers**
3. **A new Social Compact with Young People**

Multiple Pathways

Key Elements:

- Elevate career education to world-class levels
- Provide high-quality career counseling
- Greatly expand and improve opportunities for work-based learning

Proven Examples

- **Career Academies**
- **Project Lead the Way**
- **Massachusetts Regional Vo-Tech HS**
- **Tennessee Technology Centers**
- **U.S. Military**

Barriers We Must Overcome

- **Cultural Resistance**
- **Taking high-quality programs and reforms to scale**

Expanded Role for Employers

Goal: Businesses need to become full partners in the Pathways system.

Key roles for business/employers:

- **Career guidance**
- **Designing/developing Programs of Study**
- **Providing Opportunities for Work-based learning and Work**

Excellent Examples of Employer Engagement

- **US First Robotics Competition**
- **Wisconsin Youth Apprenticeship**
- **National Academy Foundation**
- **Year Up**

A New Social Compact

- **Why a Compact is Needed**
- **National Action Steps**
- **Regional Action Steps**

Next Steps

- **Begin a national conversation on the reforms needed to prepare far more youth for success**
- **Engage employers in Pathways to Prosperity**
- **Work with regional and local partners who want to create robust pathways systems**
- **Focus on industries like healthcare, where there is strong interest in improving pathways**

What Does this Mean for You?: A Dialogue

- Your centers have a real opportunity to help realize the Pathways Vision
- Students should graduate equipped to pursue post-secondary programs
- All students should have personal pathway plans
- How can we expand employer engagement?
- How can your centers help facilitate creation of a regional social compact with young people?