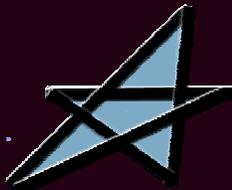


History and Future of American Higher Education and the Impact of Globalization

Presentation to the Faculty and Students of National Tsing Hua
University

Richard A. Voorhees, Ph.D.
Principal, Voorhees Group LLC
Littleton, Colorado
USA

rick@voorheesgroup.org
www.voorheesgroup.org



Learning Objectives

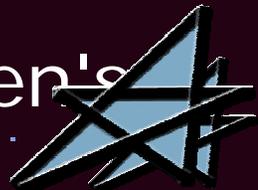
At conclusion of this presentation, participants will be able to

- a. Describe the history of American higher education and what the future may hold.
- b. Discuss the impact of online education and its effect on accreditation and institutional mission expansion and perceptions of quality
- c. Enumerate the role of "new" providers in higher education and their effect on traditional institutions
- d. Discuss the factors that underlie participation of adult learners and how government policy affects their participation
- e. Describe the opportunities that may unfold over the next decade and the pitfalls or limits of global expansion of higher education.



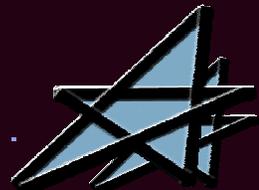
A Quick History of U.S. Higher Education

- Federal Role in Education
- Early Beginnings of Vocational Education
- Booker T. Washington
- John Dewey
- First and Second Morrill Acts of 1862 and 1890
- Smith-Hughes Act of 1917
- The Morrill Land Grant Acts, 1862, 1890
- Smith-Lever Act, 1914 (established cooperative extension)
- GI Bill - June 22, 1944 (Servicemen's Readjustment Act)



A Quick History of U.S. Higher Education

- GI Bill - June 22, 1944 (Servicemen's Readjustment Act)
- Higher Education Facilities Act of 1963
- Vocational Education Act of 1963 and Amendments of 1968
- Higher Education Act of November 8, 1965
- Carl Perkins Legislation 1984, 1990, 1998
- Family Educational Rights and Privacy Act (FERPA)
- Campus Crime: Clery Act and Legislative History

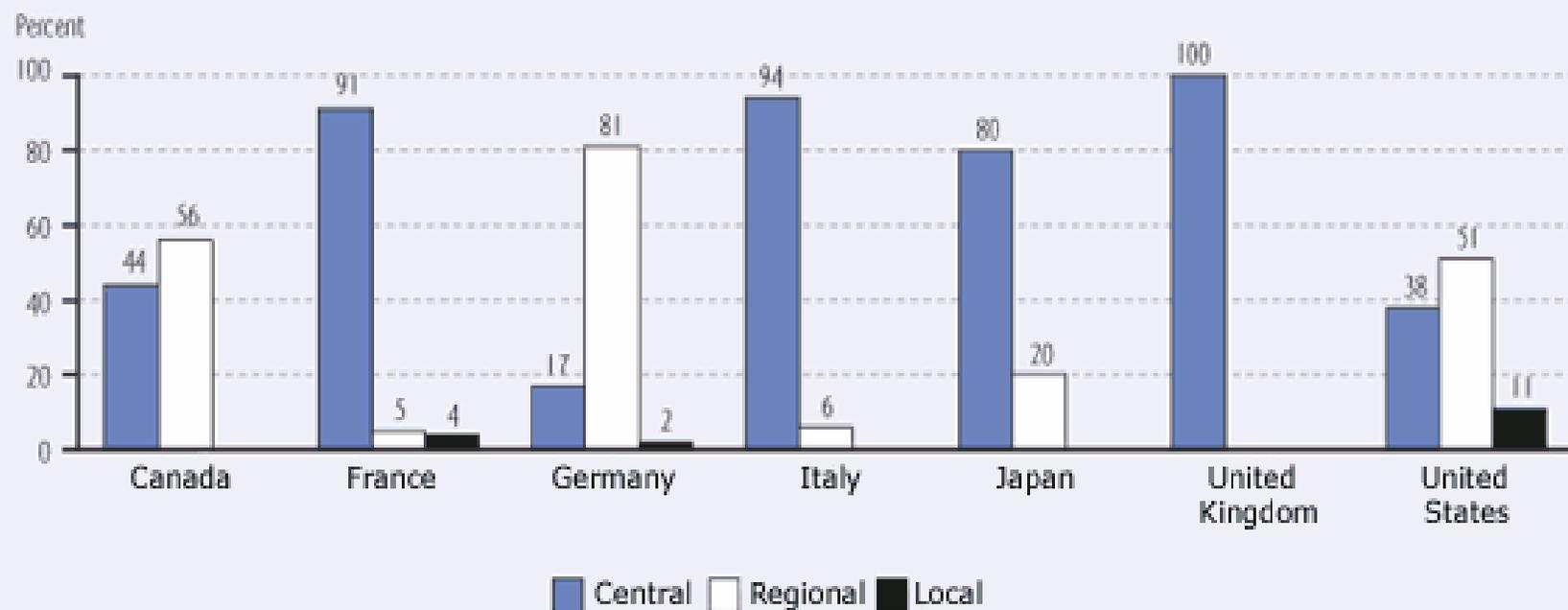


Chinese Higher Education History

- Zhejiang University came into existence in 1897 as Qiushi Academy, one of the four oldest modern institutions of higher learning in China. After 1901, it was renamed several times. In 1928, the university was formally designated the "National Zhejiang University."
- Yuelu Academy, founded in AD 976 in Song Dynasty. It went through the rises and falls of Song, yuan, Ming, and Qing Dynasty, but remained the tradition of education. In 1903 the system of the Yuelu Academy was changed and renamed Hunan High Learning. And in 1926 the school has named Hunan University.



Figure 1: Percentage of initial public funds for higher education, by level of government and country: 1997

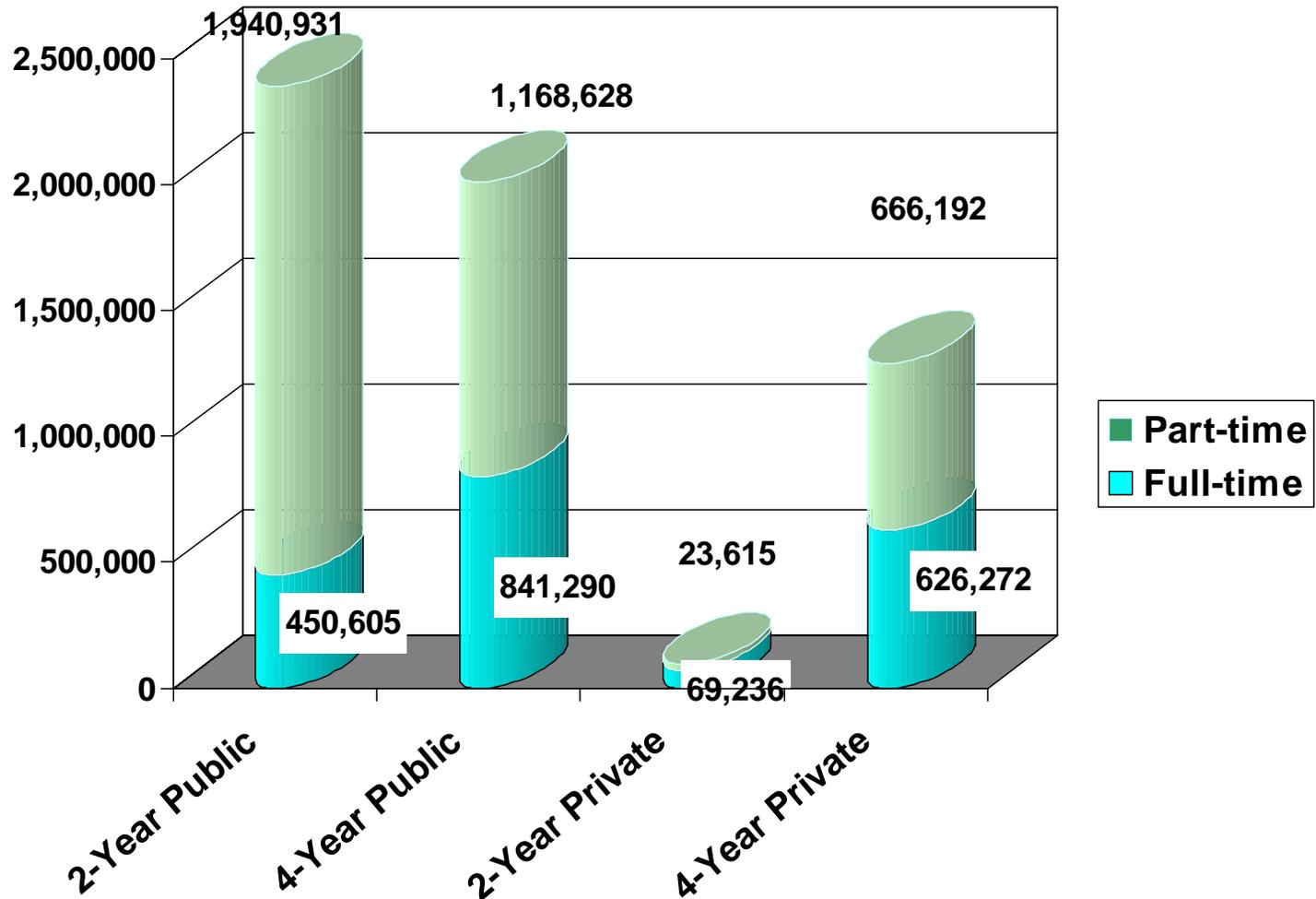


NOTE: The United Kingdom includes England, Northern Ireland, Scotland, and Wales. Figures for the United States include post-secondary, nontertiary education in higher education. Data on local funds are not available for Canada, Italy, and the United Kingdom. Data on local funds are included in regional funds for Japan. Regional funds are not applicable for the United Kingdom. Percentages may not add to 100 percent due to rounding. Data include only initial funds before transfers between levels of government.

SOURCE: Organization for Economic Cooperation and Development, *Education at a Glance, 2000*, Table B 6.1.b.



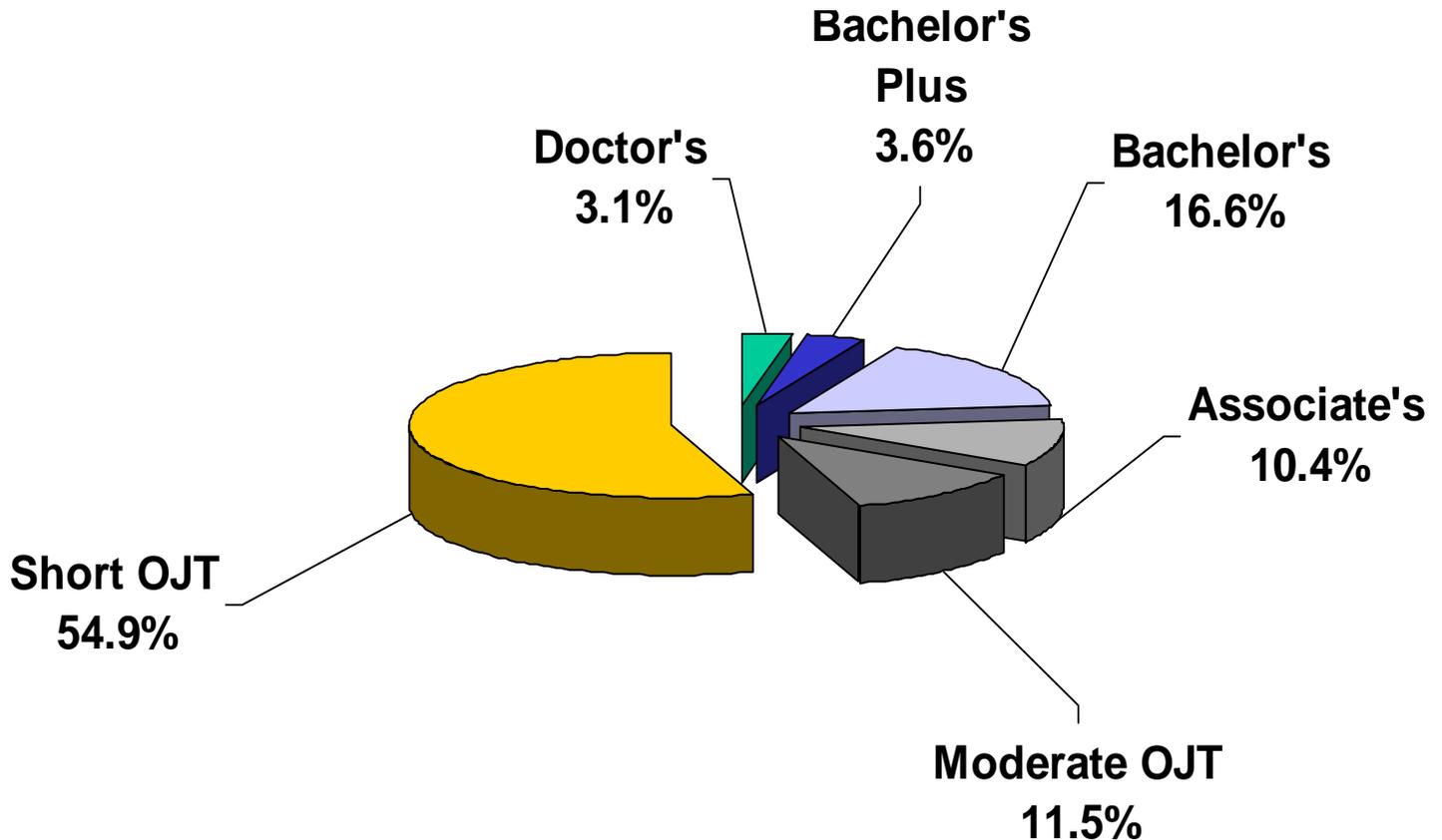
Adult Enrollment Status by Institution Type



Source: IPEDS Enrollment



Training Required for Largest Growing Occupations, 2000-2010



Source: Bureau of Labor Statistics, 2002

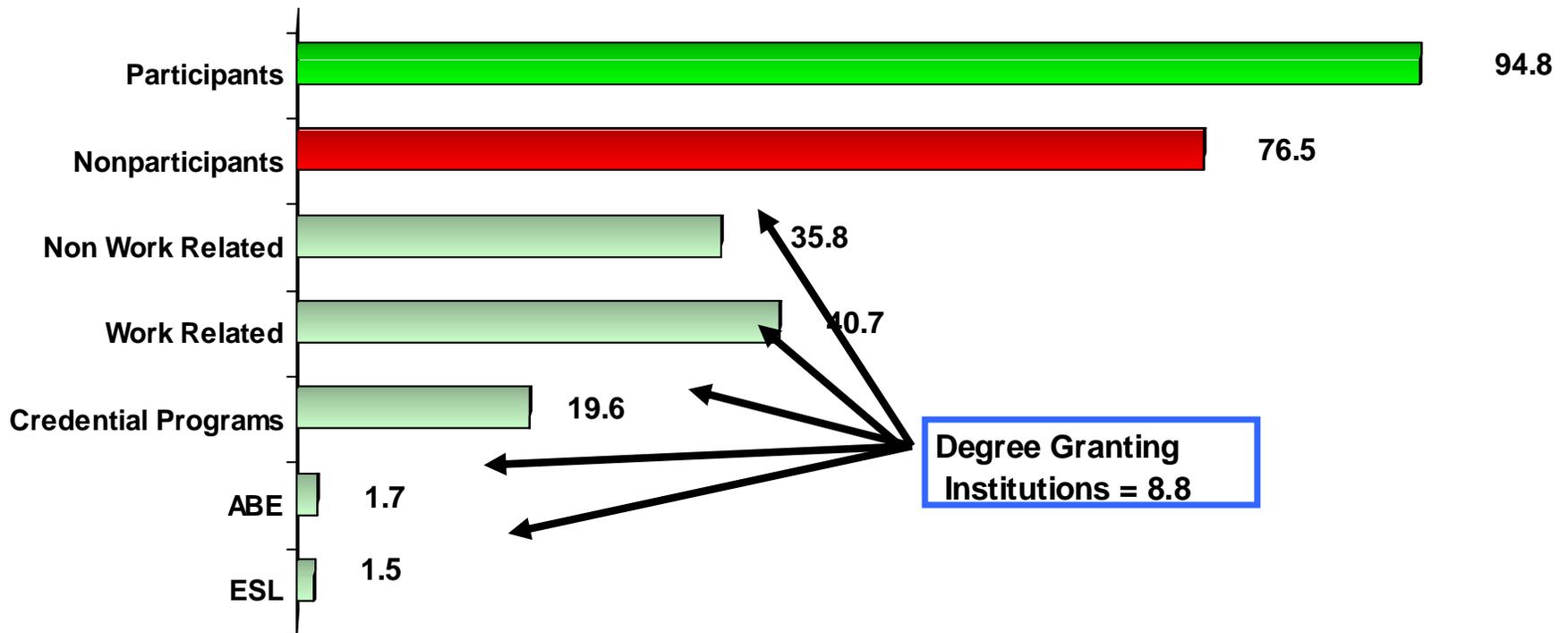


The Effects of Mass Education

- In the 50s and 60s, it was still possible to expect that universal education would provide all citizens in a country with a modern scientific outlook,
- Today, most students in American higher education are in the humanities and in the new service professions. Science and technology became too complex and difficult for the common student to grasp
- The cultural gaps between elite and mass may be larger now than thirty or forty years ago.
- Growth of mass higher education does not mean, necessarily, that we have more people well educated



Adults in Formal Learning in the US (in millions)



The American Workscape

- Technological displacement
- The majority of new jobs are part-time
- Income gaps for the knowledge class
- More highly educated adults participate most in formal learning
- Family time
- Employers and learners are most interested in the shortest route to results



Shifting Yuppies

Two-thirds of the 50 largest metropolitan areas had fewer young adults in 2000 than in 1990, according to the Census. These cities now realize that they've done little to appeal to the labor force that will shape their economic future: educated 25- to 34-year-olds.

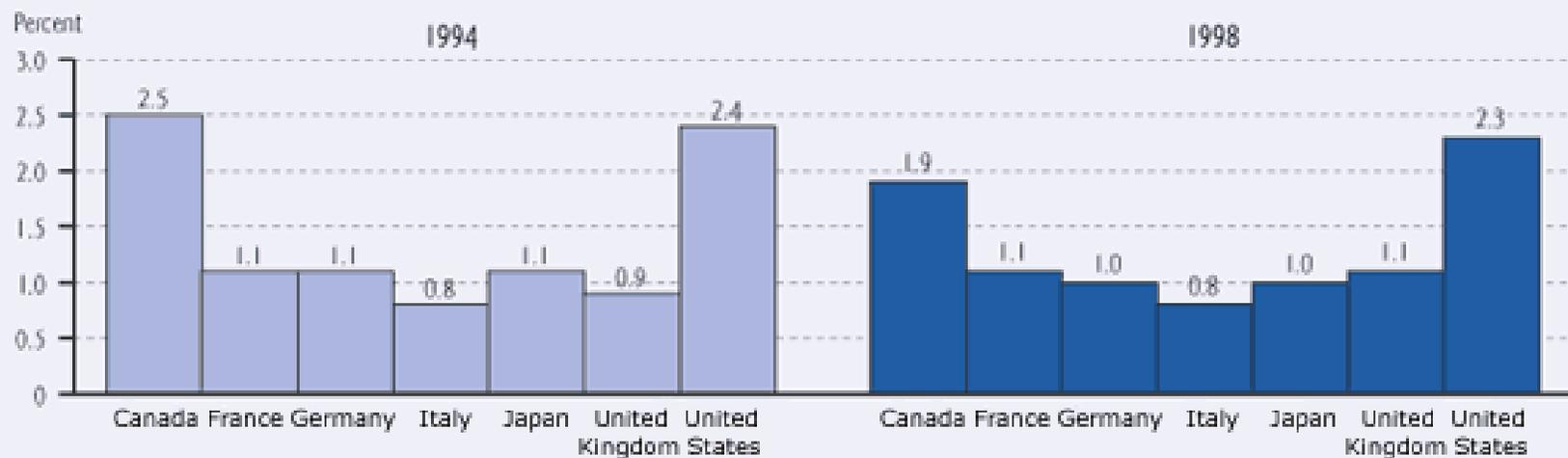


Economics and Higher Education

- Forty percent of American households did not enjoy the income benefits of the long economic expansion.
- Evidence of a growing skills and education gap between Americans and a failure to make the most of the nation's human resources
- Low domestic savings did not meet investment needs--growing reliance on foreign sources of capital for investment
- Declines in the share of national resources committed to frontier research
- Decreasing numbers of science and engineering degrees in every field outside the life sciences
- Levels of R&D investment and technical talent declining in a knowledge economy



Figure 1b: Public and private expenditure for higher education as a percent of Gross Domestic Product (GDP), by country: 1994 and 1998



NOTE: The United Kingdom includes England, Northern Ireland, Scotland, and Wales. Gross Domestic Product (GDP) is the producers' value of the gross outputs of resident producers, including distributive trades and transport, less the value of the purchasers' intermediate consumption plus import duties. GDP is expressed in local money (in millions). Prior to 1997, there was no category called "post-secondary non-tertiary" education in the international classification. For 1994, expenditures for this type of education were included in expenditures for secondary education in all other countries presented here except the United States. With the establishment of "post-secondary non-tertiary" education as a separate category in 1997, other countries continued to include expenditures for this category in expenditures for secondary education in data for 1998. Expenditures figures for the United States include expenditures for post-secondary non-tertiary education in expenditures for higher education for 1994 and 1998.

SOURCE: Organization for Economic Cooperation and Development, *Education at a Glance, 2001*, Table B2.1 b; *Education at a Glance, 1996* Table F 1.1 c.



Does the Investment Work?

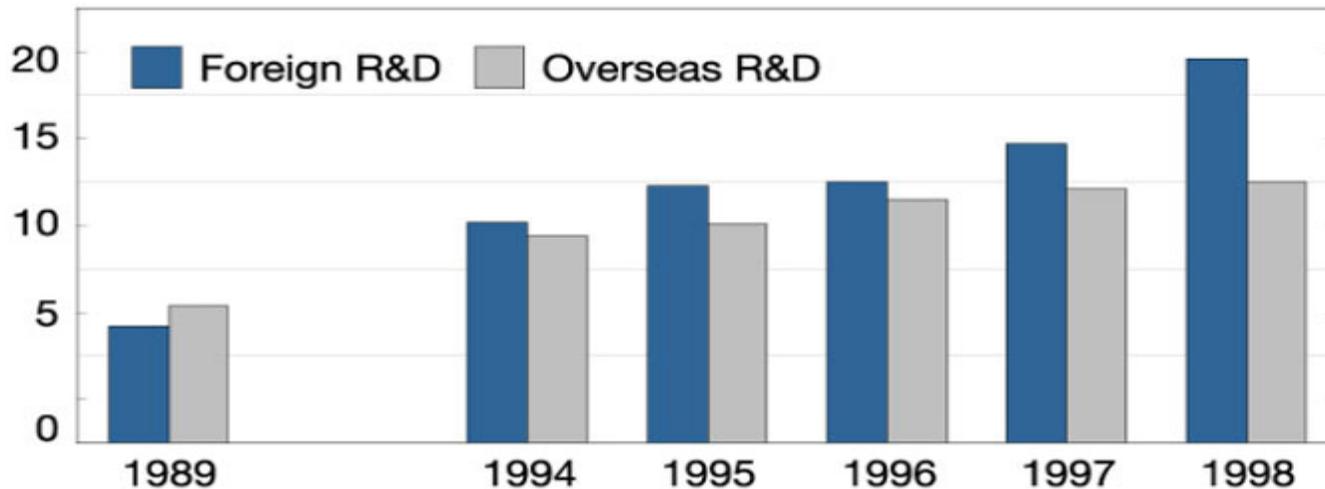
	Per Capita GDP, 1997	IMD Competitiveness Score, 2000
Expenditure per FTE Student in 1992	.603**	.745**
Percentage of GDP spent on higher education in 1992	.521**	.687**
% in population of higher education entrants 1992	.505*	.481*

Source: Association of University
Teachers, 2000



Globalization of U.S. industrial R&D

Billions of current dollars



NOTES: Foreign R&D refers to R&D performed in the United States by U.S. affiliates of foreign parent companies. Overseas R&D refers to R&D performed abroad by foreign affiliates of U.S. parent companies.

SOURCE: National Science Board, *Science and Engineering Indicators-2002*



Globalization



Investing and Financing Higher Education

- 21 states are reporting shortfalls for FY05. Of the 21 states that have already prepared budget estimates, collectively, they are short between \$32 and \$33 billion. This shortfall represents approximately 9 percent of total state expenditures . . .



Global threats to economic, social and political progress

- Environmental degradation
- Over-population
- Nuclear Proliferation
- World-wide economic collapse
- Global spread of disease and biological warfare
- Rise of drug cartels and organized crime
- Abuse of human rights



Globalization and Higher Education

- the transformation of the classic universities into massive systems of higher education
- the growing, worldwide dominance of the American model of higher education
- The transformation of science, technology and education into a large business sector, the “knowledge economy”
- The pool of students will grow dramatically



Globalization and Higher Education (continued)

- Collaboration among universities across national lines to provide degree programs
- Professionalization of student exchanges, with academic mobility on the rise
- More students and universities are becoming anglicized because of the Internet and English as the dominant world language
- Education consumers are becoming more value conscious and quality conscious
- Advances in technology stimulate and spread more options

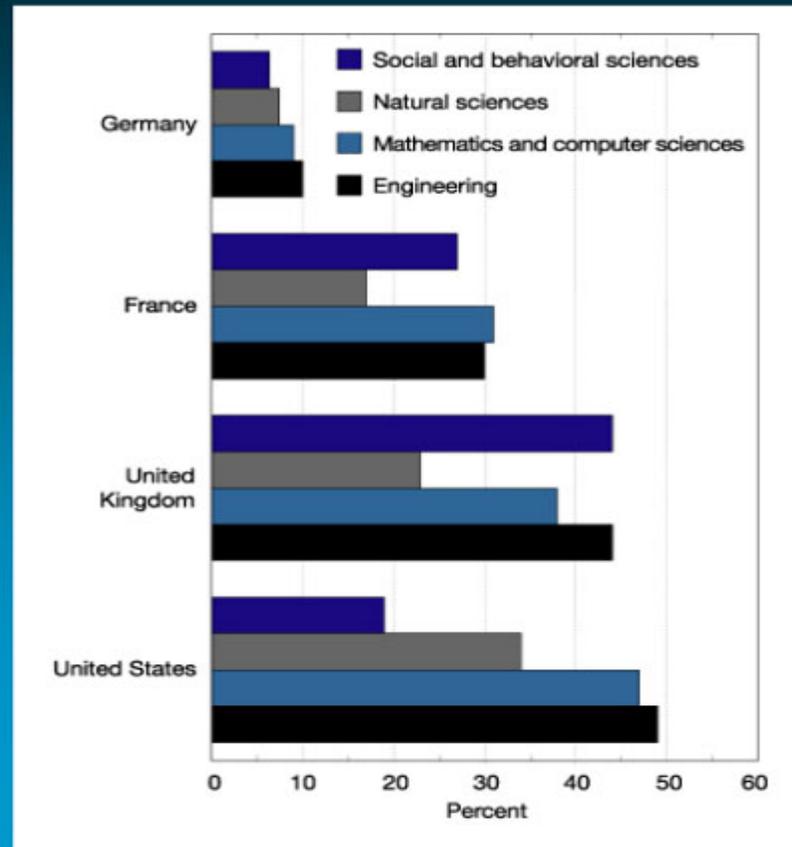


Global Workforce Skills

- Negotiation
- Conflict resolution
- Oral and written presentation
- Leadership
- Group dynamics
- Dealing with technology
- Managing and influencing change



Doctoral S&E degrees earned by foreign students in selected countries, by field: 1999



SOURCE: National Science Board, *Science and Engineering Indicators-2002*

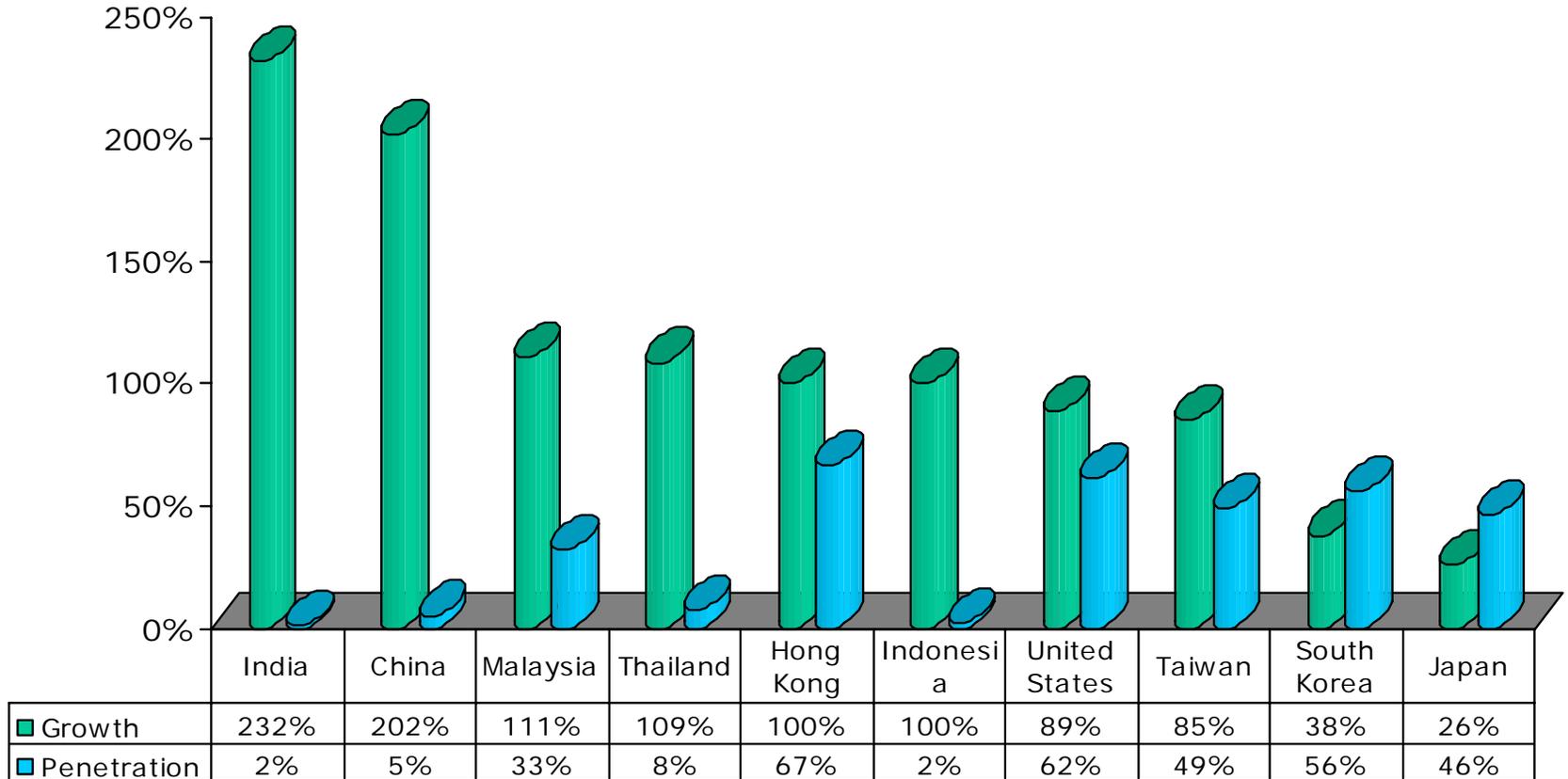


Virtual Universities in Global Environments

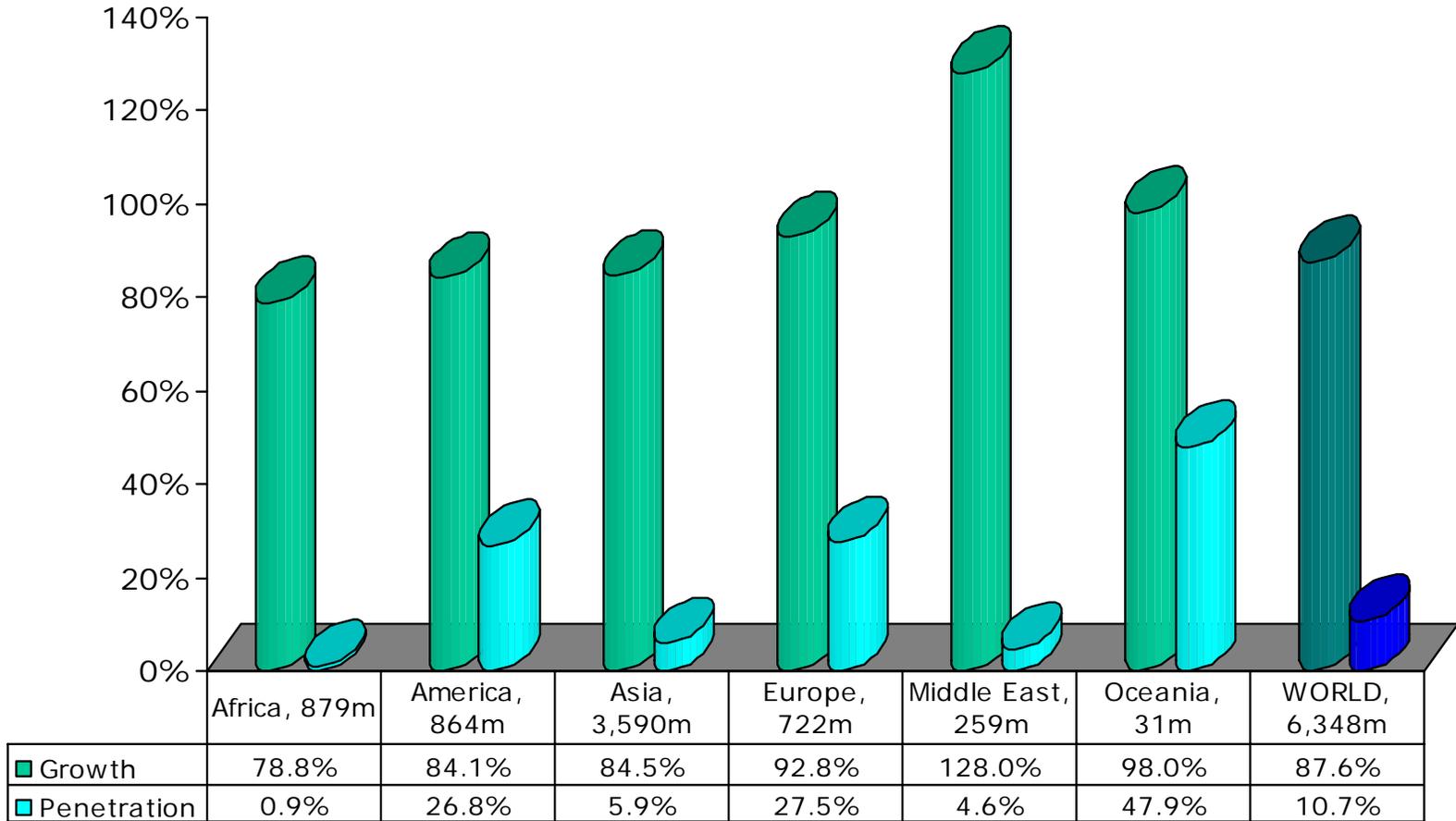
- Over 30,000 courses and 4,000 programs on the World Wide Web.
- Uneven development among countries
- "Content imperialism"
- Globalization of infrastructure
- Unbundling of functions v. control
- 5 Content Management Companies will survive



Growth in Internet Use and Penetration, 2000 to 2003



Regional Growth in Internet Use and Penetration, 2000 to 2003



New Technologies

New technologies, by their very nature, depend on a limited number of persons with extremely high qualifications, which can produce in large scale for extended consumer markets, differently from older technologies, which required large numbers of skilled and semi-skilled workers



Why Open Source Will Win

- Vendor rivalry...Microsoft's competitors need to weaken it's base
- Component Chaos...software as units
- Appliance computing...thin margins
- International appeal...afford to train citizens with proprietary software
- Collegiate appeal...in heavy use by students



Characteristics of High Impact Institutions

- Faculty development
- Administrative leadership and coordination of international efforts
- Interdisciplinary courses
- Innovative and proficiency-based language requirements



Characteristics of High Impact Institutions (continued)

- A focus on resource acquisition
- Fundamental redesign of programs and services
- Become conscious of a global perspective in their programs, research and services.



Remaining Issues



Should Higher Education Be Regulated?

- Should the market dictate who is educated and how they are educated?
- Or should government?
- How about specialized accreditation?
- It is not possible to deregulate higher education without deregulating also the job market, not only in the private sector, but also in the access to public jobs.



Steps Toward a More Competitive Workforce

- Assess workforce capacity and employer needs
- Analyze educational resources and policies
- Establish and monitor explicit goals and strategies
 - Bring more citizens into the workforce
 - Employ the under- and unemployed
 - Raise workforce participation rates among older workers
 - Improve productivity
 - Increase investment in technology, training and education



References and Sources Not Cited on Slides

Association of University Teachers (2002). Retrieved on October 31 from <http://www.aut.org.uk/media/html/losingvitalinvestment1.html>.

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