



## *Setting the Context -- The 21st Century Global Economy*

### *Montana – Board of Education*

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# Council on Competitiveness

## “Innovate America”

- World is more interconnected and competitive
- Growing economic interdependencies
- Shifts in how economies and societies work
- Accelerating pace of change will accelerate
- Leveling of playing field

We stand in an  
“inflection point in history”

Information Infrastructure & Use	Now	Per 1000 People	Then (1990)	Per 1000 People
Personal Computer	898 B	140	131 M	19
Cell Phones	27 .B	416	11.2 M	2
Countries Connected to the Internet	209		20	
Secure Internet Servers	401,050		0	
Internet Web Sites	110 M		9,300	
Host Computers Connected to the Internet	395 M		313,000	
Internet Storage (in Terabites)	532,897		0	

# Our Collective Challenge

Need for highly educated and technically proficient workers to fuel our economy

- US is demographically overshadowed by India and China
- Need to adequately educate our citizens for new types of work
- Education in math and science is key to maintaining a competitive workforce in the global economy

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## Gates sees engineer shortage looming

By Benjamin J. Romano  
*Seattle Times technology reporter*

Microsoft Chairman Bill Gates sees a talent shortage coming.



"The overall picture is that the United States is not turning out, from any group, as many of the great engineers as there will be jobs for," he told an energetic audience gathered at the company's Redmond headquarters for a weekend conference of the National Society of Black Engineers.

Microsoft Chairman Bill Gates spoke to group

That's a problem for Microsoft, which relies on thousands of engineers skilled in math and computer science.

"Our factory is people sitting in their office and writing lines of code," Gates said.

# Did You Know . . .

- The 25% of the population in China with the highest IQs is greater than the total population of North America
- In India, it's the top 28%
- Translation for teachers here today:
  - China has more honors kids than we have kids!

# Did You Know . . .

- China will soon be the number-one English-speaking country in the world
- And if we took every single job in the U.S. today and shipped it to China . . .
- China would still have a labor surplus

# According to Former Secretary of Education Richard Riley . . .

- The top 10 in-demand jobs in 2010 didn't exist in 2004.
  - We are currently preparing students for jobs that don't yet exist . . .
  - Using technologies that haven't been invented . .
  - To solve problems we don't even know are problems yet

# Did You Know . . .

- We are living in *exponential* times.
  - The number of text messages sent and received every day exceeds the population of the planet.
  - There are more than 2.7 billion searches performed on Google each month.
  - I want to know who answered all those questions before Google?

What Does It All Mean?

Shift Happens



# Thomas Friedman Summed It Up Best . . .

- Globalization is a reality
- Competition is global
- We work in a turbo-charged environment
- Business goes where the “talent is”
- Lifetime employment has been replaced by lifetime employability

# U.S. Workforce Crisis

- In a survey of U.S. manufacturers, 90 percent of employers reported moderate to severe shortages of skilled workers.
- Estimated 300,000 skilled IT jobs that have gone unfilled over the last decade because there was no one qualified to fill them.
- Challenge for Microsoft, where at any given time we have between 3,500 and 4,500 open positions in the U.S.
- Wish list of skills required to meet future needs
  - Technical skills
  - Strong computer skills

# Education Is Everything

- Workforce development must provide opportunities for workers to receive postsecondary education and training opportunities.
- The jobs of the future will need to be filled by “knowledge workers” with specialized skills and training.
- More than 90% of the fastest-growing jobs in the U.S. require at least some postsecondary education. 63% of the fastest growing jobs require a college degree.
- Meanwhile, only about 30% of our population possesses a college degree.

# A Changing Education Landscape

## Growing market

- 3.2M students took at least one online course during 2005 (vs. 2.3M in 2004)

## Increasing credibility

- 55% of employers prefer traditional degrees over online ones (vs. 96% previously)
- 62% of Chief Academic Officers rated learning outcomes same or superior to face-to-face (vs. 57% in 2003)

## Removal of regulatory barriers

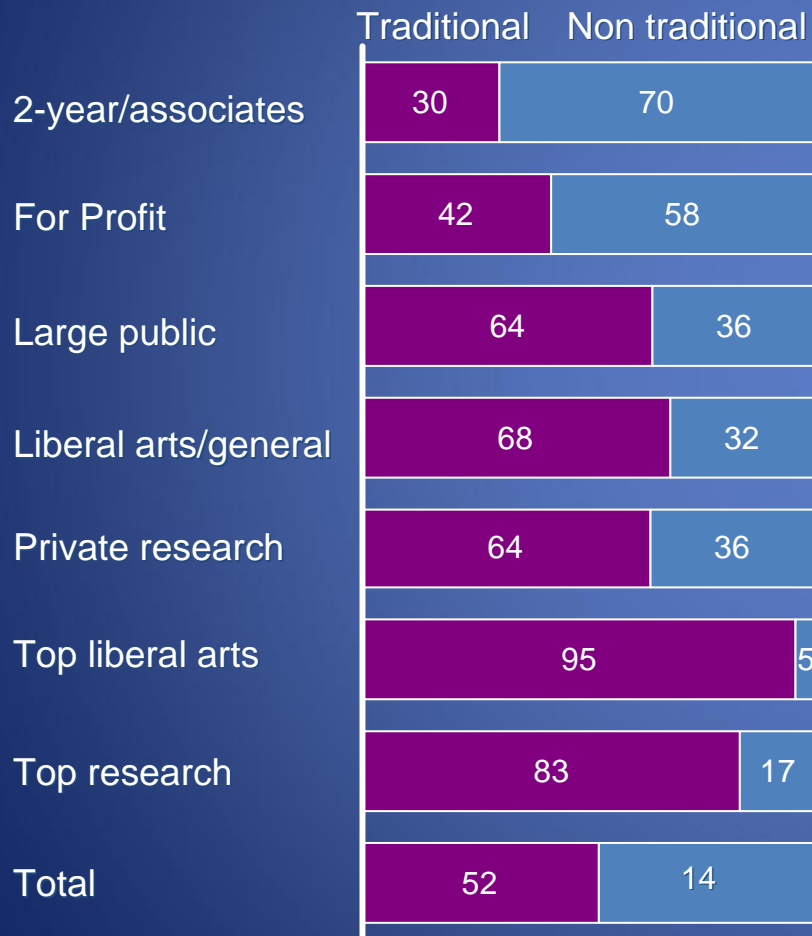
- Federal student-aid available for distance-learning institutions as of February 2006

\* Source: McKinsey analysis

# Growth of Digital, Non-traditional Student

Traditional vs. non-traditional students,  
Total, 2005

Millions; Percent



\* Source IPEDS and McKinsey

# Where Does This Leave Our Students?



- Considering better cost alternatives
- Enrolling for more on-line courses or full degrees
- Juggling work and study
- Going where the business is
- Demanding relevance and a better sense of progression



So what about students of today?



Who are they?

Most have never known a world without:

- the net
- cell phones
- digital music
- video on demand
- IM





# what do they want?

## values

autonomy  
authenticity  
connecting &  
sharing  
creativity  
individuality  
constant  
stimulation

## priorities

friends, friends,  
friends  
fun  
music  
real time  
interaction  
self presentation

## likes

devices/phones  
identities  
cool  
stuff friends like  
new stuff

## hates

complexity  
bad design  
cost  
things that get in  
the way of  
expression

# Digital Lifestyle



# Digital Workstyle



# Roadmap to 21<sup>st</sup> Century Learning



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