Evolution of Education

“The day is coming when the work done [via distance learning] will be greater in amount than that done in the class-rooms of our colleges.”

Former President of University of Chicago & Bradley University

"[The use of technology will put] American education 25 years ahead"

Chairman of the Federal Communications Commission
Evolution of Education

“The day is coming when the work done [via distance learning] will be greater in amount than that done in the class-rooms of our colleges.”

-William Rainy Harper, 1885
   Former President of University of Chicago & Bradley University

"[The use of technology will put] American education 25 years ahead"

-Technology referred to is delivering lessons over the radio in 1948
   Chairman of the Federal Communications Commission
Youngsters Not Enrolled in College

Total number of college age youth left out of tertiary education worldwide: 366 m
US and OECD College Attainment

Percentage degree attainment in OECD countries and the U.S. by age group, 2010

Source: National Center for Education Statistics
Educational Level - US

How Well Educated Are Americans?

Highest level of education among adults ages 25-64

- Advanced degree: 11%
- Bachelor’s degree: 19%
- High school diploma or less: 31%
- Some College: 40%

Notes: Based on Pew Research Center calculations of 2009 American Community Survey data. Some college includes two-year college graduates. Total percentage does not equal 100 due to rounding.

A Growing Share of Young Adults are College Graduates

College attainment of 25- to 29-year-olds

- Bachelor’s+
- Some college+

Source: March Current Population Survey (CPS) Integrated Public Use Micro Sample
Notes: Prior to 1992, persons with at least a bachelor's degree refers to those with four or more years of college. Before 1992, persons with at least some college refers to those who completed at least one year of college.
By 2018, the US will need 22 million more credentials to fill good jobs, but will fall short by 3 million. College enrollment in 2012 declined by nearly a half million students compared to a year earlier, according to the U.S. Census Bureau.
College Graduates

Percentage of population that has attained tertiary education, by age group (2009)


Countries are ranked in descending order of the percentage of 25-34 year-olds who have attained tertiary education.


StatLink  http://dx.doi.org/10.1787/888932459831
Education as an Investment - US

Returns to Education Compared to Other Investments

Note and sources: Sample is civilian, natural-born U.S. citizen population. Earnings data come from the Current Population Survey (2010-2012) and tuition data come from NCES (2012). An individual with some college was assumed to have stayed in college for 1.83 years, the average duration of post-secondary schooling of individuals reporting "some college". Data for returns to other assets come from Robert Shiller, the National Mining Association, and the Federal Reserve Bank of St. Louis and reflect real returns between 1928 and 2012.
Those who graduate from a four-year college, on average, earn $20,000 more a year as a result of the degree.
Education and Earnings - US

Mean Earnings by Age, 2009

Source: 2009 American Community Survey (ACS) Integrated Public Use Micro Sample

Notes: Estimated for full-time, full-year workers. Plots show a 3-year moving average.

PEW RESEARCH CENTER
Education and Earnings - US

Earnings and Employment for College vs. High School Graduates (Ages 23-25)

- Difference in mean earnings (left axis)
- Difference in employment rate (right axis)

Note: Earnings and employment figures include all Americans between the ages of 23 and 25 (inclusive).
Source: Data are from the CPS for the non-institutionalized population, and from the U.S. Census for the institutionalized population.

THE HAMILTON PROJECT
Education and Employment - US

Unemployment Rates by Education, 1962-2010

Source: March Current Population Survey (CPS) Integrated Public Use Micro Sample
Notes: For persons age 25 and over. Prior to 1992, persons with at least a bachelor’s degree refers to those with four or more years of college.
How Education Impacts Work Life

Has College Been a Good Investment for You Personally?

% of college graduates

- Yes: 86%
- Not sure: 7%
- No: 6%

Note: Based on college graduates ages 18-64 who are not currently enrolled in school, n=513. "Don't know/Refused" responses not shown.

How Education Impacts Work Life

Based on employed adults

% saying work is very satisfying

- All employed adults: 45%
- Graduate school: 69%
- College graduate: 48%
- Some college/Vocational: 39%
- High school grad or less: 40%

% saying work is very interesting

- All employed adults: 52%
- Graduate school: 68%
- College graduate: 53%
- Some college/Vocational: 47%
- High school grad or less: 51%

Notes: Based on adults who are employed either full or part time, n=1,281. "Graduate school" includes those who attended graduate school but did not receive a degree. "Some college/Vocational" includes two-year college graduates.
Affordability

**Is College Affordable?**

Agree or disagree: College costs in general are such that most people can afford to pay for a college education. (%)

- Disagree: 75%
- Agree: 22%

*Note: "Don't know/Refused" responses not shown.*

**Reasons for Not Going to College**

% saying this applies to them

- Need to support family: 67%
- Would rather work/make money: 57%
- Can't afford school: 48%
- Don't need more education: 34%
- Not accepted at schools: 5%

*Note: Based on adults ages 18-34 who do not have a four-year college degree and are not currently enrolled in school, n=311.*
The cost of a private non-profit four-year college institution has risen 267% over the past 30 years.

The cost of a public four-year college institution has risen by 357% in the same period.
Tuition vs. Other Price Indices
CPI, cumulative % change since 1990
Median Household Income vs. College Costs - US

- Private nonprofit four-year
- Public four-year
- Public two-year
- Median household income
Families’ Student Loans

More Families Have Outstanding Student Loans

Share of families with student loans


... and the Average Amount Owed Has Increased

Amount owed per family for families with student loans (in 2007 $)


Education loans

$0 $5,000 $10,000 $15,000 $20,000 $25,000
Student Loan Debt
Tuition and other Costs

Two-thirds of students graduating from American colleges are graduating with some level of debt.

The average borrower has a debt of $26,600.

One in ten graduates accumulate more than $40,000 of debt.

Student loan debt has crossed $1.2 trillion.

It almost tripled between 2004 and 2012.

One in five graduates who borrowed for tuition via the federal direct loans program are not paying the money back.
Student Loan Debt vs. Household Debt
Student Loans vs Other Loans

- Student loans
- Home equity credit lines
- Auto
- Credit Card

$1.0 trillion


0.4 0.6 0.8
% of 90+ Day Delinquent Student Loans
In 2011, only 56% of US college students complete four-year degrees within six years. Only 29% of those who start two-year degrees finish them within three years.
Among adults ages 18 to 34 who are not in school and do not have a bachelor’s degree, 67% say a major reason for not continuing their education is the need to support a family. 48% say they can’t afford to go to college.
South Korea has invested $2 billion to make all textbooks digital by 2015. The total textbook sales industry is $7.5 b, out of which $5.5 b are sales of new textbooks. Digital textbooks are, on average, 53% cheaper than new print books.
Features of Digital Textbooks

**Note taking:** On screen keyboards and stylus allow students to take notes
**Writing:** Writing using the finger or stylus is possible
**Compactness:** One (e)book holds all the books, notes and more
**Highlighting:** Digital books make highlighting text possible
**Research:** Multiple content sources can be referred to from within the device. Multiple books, notes, websites, journals, videos, audio, images, are accessible in a single device
**Quiz:** Learning and testing become integrated. Clearing a quiz takes the student to the next level
**Animated content:** Explanations can be accompanied by animated illustrations and video, instead of static images
**Games:** Games are integrated with lessons, making learning and testing attractive to students
**Interactive timelines:** History comes alive through interactive timelines laced with images, audio, video,
**Study groups:** Study groups can be formed online, from the digital books. Text, audio and video chat can be done from within a page of the textbook
Michael J. Sandel, Professor, Harvard University, teaching the course ‘Justice’ at Sanders Theater, Harvard University
There are students behind him too. In Sao Paulo, New Delhi, Tokyo and Shanghai. He teaches them through video conferencing.
Prof. Sandel has students asking questions, answering them, or holding discussions not only at Harvard...
...but in South America and Asia as well!
Interactivity and participation can be taken to whole new levels.

A class spread over Boston, Tokyo and Shanghai has students discussing nuclear power plants.
The professor’s lecture is translated into Japanese, and the students’ response is translated into English.

Here the student quips about Rousseau’s views being altered by Youtube.
Youngsters separated by distance and language are able to directly talk to each other, and see each others’ point of view. This has long term social and political implications apart from being a great educational method.
Images and Charts courtesy of

• http://www.pewsocialtrends.org/files/2011/05/higher-ed-report.pdf
• http://dx.doi.org/10.1787/eag-2011-en
• https://www.google.co.in
• https://www.edx.org/