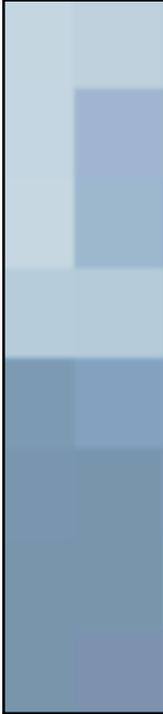


Sowing Science Seeds:
The National Perspective on
Science Education and Global
Competitiveness

Dr. Ainissa G. Ramirez

ainissa.ramirez@yale.edu

October 26, 2006



Policy Roadmap

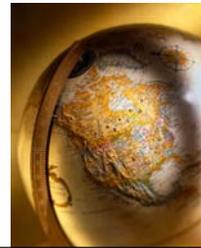
What are the 10 actions that policymakers could take to enhance the science and technology enterprise so that the US can successfully compete and prosper in the global community of the 21st century?

-Senators Alexander & Bingaman



Global concerns...

- Globalization
- Outsourcing/Off-shoring
- Rise of other nations (China, India)



Globalization is real



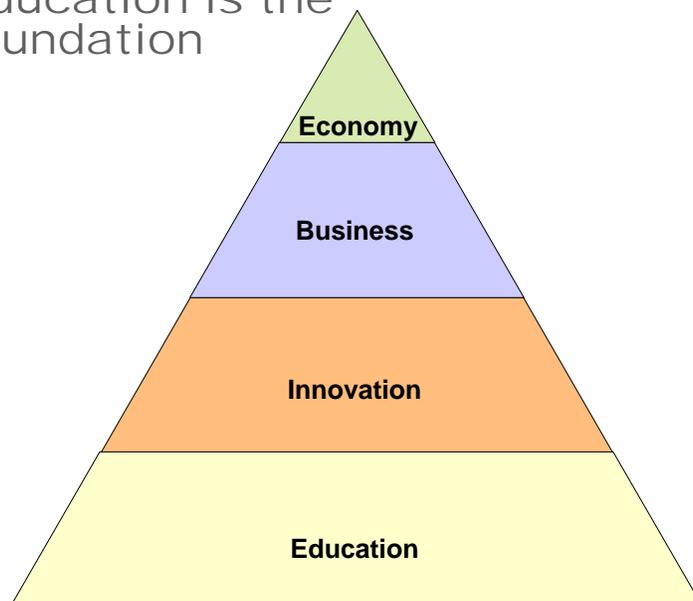
- Read Thomas Friedman's
"The World is Flat"
- See PBS show "1-800-INDIA"
- Call Dell Tech Support: (1-800-624-9896)
(or American Express, Sprint, Citibank, GE, IBM etc.)

Competitiveness Indicators



- The US is the importer of high tech products. (*PC, microwave, Internet, IPOD*)
- The US is generating less patents
- Chemical Plants: US (1); China (50)
- US 15yr olds are ranked 24th
- IBM sold its PC business to China
- In this **Information Age**:
 - the largest US employer is **Wal-Mart**
 - K-12 science education is slipping

Education is the foundation

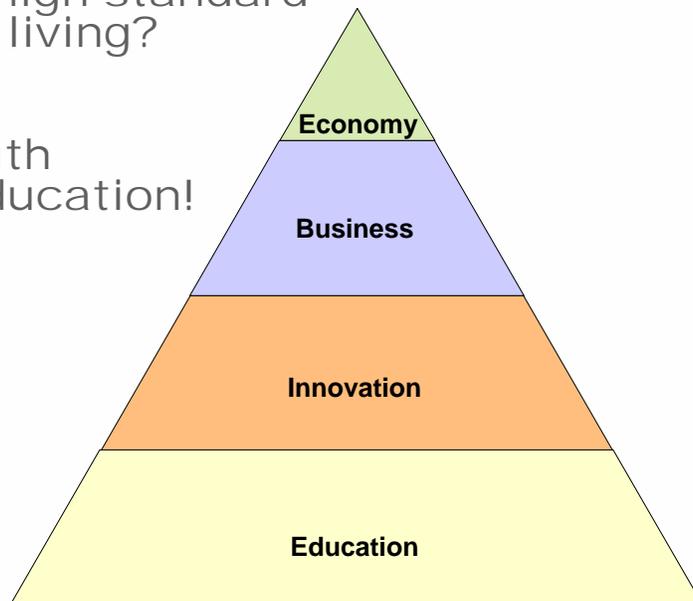


Forces that Change Education

- War (WWII, Korean War)
 - *GI Bills*
- Competition (Sputnik, The Cold War)
 - *The Golden Age of Physics*
- Injustice (Civil rights)
 - *Desegregation of Schools*
- Fear (Oil prices, Globalization, Homeland Security)
 - *Energy research, ??*

How do we keep
a high standard
of living?

With
Education!



What's the Big Deal with Science?

Well...

- Scientists and engineers create jobs
- 50% of companies are due to innovation



Ideas

= Jobs!

Anatomy of an IPOD



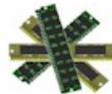
Micro-hard disk
(1955)



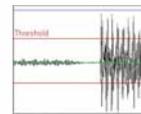
Li-ion battery
(1991)



LCD display
(1972)



DRAM cache
(1966)



Signal compression
(1980?)

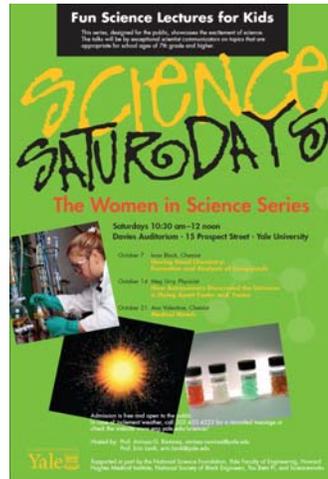


US Action Items

- Increase the number of teachers by 10,000 and impact 10 million students.
- Increase the skills of 250,000 of our current teachers. **(This means you!)**
- Enlarge the student pipeline.



Science Saturdays



www.sciencesaturdays.org

Thank you.