Technology Enhancing Learning

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New technology has always changed how people learn.

Bright motivated students have always found ways to learn.

- **Lecture:** Etymologically, “A Reading”
- **Invention of printing** (China ~11th century)
- **Printing press** (Gutenberg ~1450)
- **Offset rotary press** (~1900)
- **Television** (Mass phenomenon 1950s)
Historical Context (cont.):

- **Personal computer** (1980s)
- **Internet** (1990s)
- **Search engines, distributed interactive computing** (1990s -> 2000s)
- **Personalize collective recommender algorithms** (2000s -> Google, Amazon, Netflix, etc.)
Coming Wave:

- **Adaptive Learning Systems**
  Learning about the learner to enhance the experience

New online environments will supplant the *textbook* with a powerful interactive learning resource.

*Artificial intelligence*
  *enhancing the human-computer interaction,*

*Social networking*
  *expanding the reach of human-human interaction,*

*Data analytics*
  *to allow constant improvement in learning experience.*
National Need: Stretch the “Iron Triangle”

Advance Quality of Learning

Improve Access & Success

Control Costs
Unbundling learning: What is “learning”? 

- Learning as flowing from experience 
- Learning as testable, measurable competencies 
- Learning as socialization and social skills 
- Learning as meta-skills 

Massive Open Online Courses (MOOCs) 

Questions: Authentication, adequacy of assessment, social interaction, quality assurance. 

Under what conditions will a MOOC be worthy of University of Illinois academic credit?