This talk is informative to me, from which I know generally about the history and development of education in US. From questions that were put forward by the audience, I realize the problems embedded in education have connections to much larger context, such as a community or society.

I basically agree with points conveyed in this presentation, including those to make mandatory education shorter and to give high-school age students an option to work. It is related to if a student will take initiative when learning or will just receive knowledge passively.

-Yingdan Huang

The Second Educational Revolution: From Apprenticeship to Schooling to Lifelong Learning

Presenter: Allan M. Collins
Northwestern University
Friday, October 20, 2006

Some notes and snapshots of slides:

- New education stories
  - Seymour Papert
  - Literacy becomes less central
  - Michael Lewis – “Next”

- Précis of talk
  - Enthusiasts vs. skeptics
  - A little history
  - Seeds of a new system
  - What it all means
  - Caveat: Neither advocates nor opponents

- Technology change the way of teaching

- Technology skeptics arguments:
  - To the degree technology is flexible, it will be adapted to fit that system
  - To the degree it is not flexible, it will be ignored or kept in the periphery

- Incompatibilities between schooling and technology
  - Uniform learning vs. customization
  - Teacher as expert vs. diverse sources
  - Standardized assessment vs. specialization
  - Knowledge in head vs. reliance on resources
  - Converge vs. knowledge explosion
  - Learning by absorption vs. learning by doing
  - Just-in-case learning vs. just-in-time learning (learning what you need when you need it)

- Synthesis of arguments
  - Enthusiasts and skeptics are both correct
  - The seeds of a new system are emerging
  - Industry revolution -> universal schooling knowledge revolution -> lifelong learning
From apprenticeship to universal schooling
(Apprenticeship – before 19th century)
- Industry revolution led to immigration and growth of cities
- Three possible ways to occupy children in cities
- Horace Mann argued that education was needed for social cohesion and for equity

The evolution of American school system
- K-8-4 plan: 8 grades (elemental school) and 4 grades (high school)
  (By 1820s, the system had settled into the “best” system)
- Schools follow the pattern of development of social systems: Hardening of the arteries (?)

Seeds of a new system
- Home schooling (Tech makes it more feasible)
- Workplace learning (e.g. Motorola, train people statistics)
- Distance education
- Adult education
- Learning Centers
- Educational television and videos
- Computer-based learning environments (SIMS)
- Technical certification
- Internet Cafes

Comparison of 3 eras
- Responsibility: parent -> state -> individuals
- Content: practical skills/literacy -> disciplines/basic skills -> learning to learn
generic skills
- Pedagogy: apprenticeship -> didacticism -> interactive learning environments
- Assessment: observation -> testing (feedback & learning disconnect) -> embedded
- Location: home -> school -> multiple venues
- Culture: adult -> peer -> mixed
- Relationships: personal bonds -> authority figures -> human-computer interaction
  (Peer culture??)

What is lost and what is gained?
- Losses: equity, citizenship, social cohesion, diversity, commercialism, broader
horizons (??)
- Gains: more engagement, less competition, customization, more responsibility,
less peer culture (competition: 20% win, 80% losers; customization: more
responsible for what you need)

Where do we go from here?
- State of flux: time when visionaries can have impact
- Imperative of technology (customization, interaction, learner control)
- Specialized certifications
- Rethinking high school (Suggestion: make education mandatory through only
8 grades, give high-school age students pathway to do it)

Conclusion:
- Apprenticeship era: education was personal, resources were intensive and engaging
- Schooling era: education was mass oriented, efficient and bureaucratic
- Lifelong learning: it is becoming interactive, customized and learner-controlled
- What kind of world we take in as we do the design