Transforming Education Through Emerging Educational Technologies

T-561
https://canvas.harvard.edu/courses/18484

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“Emerging” Technologies

- Science-based innovations that have the potential to create a new industry or transform an existing one (disruptive)
  - the knowledge base is growing
  - the application to existing markets is undergoing innovation
  - new markets are being tapped or created

Often are based on many prior emerging technologies (i-phone tech history graphic)

Questions for Shared Reflection

- Which digital technologies portrayed are not routinely used now?
- Is there a technology you think would be transformative if repurposed for education? How would it empower learning?
- Is there a technology that seems “cool,” but not useful?
New Tools for 21st Century Work

- Life-sized telepresence with translation
- Complex visual interfaces on touchscreens
- Digital ink
  - Card-sized notices
  - Transfer from screen to paper and back
  - Customized newspaper with videos
- Internet of Things: every object seamlessly connected
  - Every surface a display
- Augmented reality
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What is Educational “Transformation”?  

If we were to redesign education not to make historic models of schooling more efficient, but instead to prepare students for the 21st century—simultaneously transforming teaching in light of our current knowledge about the mind—what types of scalable, sustainable learning environments might sophisticated technologies enable us to create?
Key Questions for Educational Visions

- Which technologies are transformative?
  - What types of transformation do they enable?

- Are these technologies practical in terms of:
  - Usability
  - Compatibility?
  - Scalability?
  - Value?
  - Cost?
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Assessing Emerging Educational Technologies

- What difficult problem in learning addressed?
- What ”affordances” powerful for learning?
- What potential weaknesses in developing learners’ knowledge and skills?
- What types of outcomes monitored to determine educational effectiveness?
- What kinds of implementation and integration issues in educational settings?
- What evolutionary path?
Cooperative Learning

- **Positive interdependence**
  
  "We need contributions from each of my team members if we’re doing to succeed."

- **Promotive, face-to-face interaction**
  
  "How I think, talk, and act toward my team members will influence how well we perform."

- **Individual accountability**
  
  "Although my team members can help with the assigned task, my individual performance/contribution will shape my grade."

- **Social skills**
  
  "Working effectively together as a team means that I need to improve my interpersonal skills."

- **Group processing**
  
  "Our team has to reflect on its performance and think together about how we might improve."

http://www.foundationcoalition.org
Anytime, Anywhere Learning: Google Community
Event-based Twitter Chats
Professional Learning Communities: Google Hangouts

All participants show up at bottom. Main picture switches with speaker.
Proposing a Class Assignment

1. Applications are due **Tuesday the 6th** at the latest
2. Submit using the LHS “Assignment” tab
3. Please use the file naming convention described at the end of each assignment – thanks!