WHAT ARE THE THREE THINGS THAT EVERY STUDENT SHOULD KNOW TO THRIVE IN THE DIGITAL AGE?

Inspired by Cathy Davidson
Today’s Agenda: Exploring Why and How to Integrate Digital Approaches into Learning

**[Session 1] Why digital learning?**

**[1] What** do students need to learn?

**How?**
- [1] Frameworks
- [2] Case studies
- [3] Tool playtime

**[4] Synthesis:**
create a digital assignment
What are key 21st century challenges facing students?

Daniel Pink on Challenges for 21st Century:

• Abundance
• Asia: Global competition
• Automation of work
How do we prepare students?

Pink’s Six Senses

http://divergentmba.wordpress.com/2009/12/07/%E2%80%9Ca-whole-new-mind%E2%80%9D%E2%80%9Cyour-plan-for-developing-the-right-brain-critical-to-your-future-successes%E2%80%9D/
Transforming Students through Liberal Education

“Liberal Education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change.... A liberal education helps students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings.”

--LEAP, “What Is a 21st Century Liberal Education?”

(emphasis added)
A Selected List of 21st Century Literacies

(Davidson)

- Attention
- Collaboration
- Narrative, Storytelling
- Critical consumption of information
- Learning, Unlearning, and Relearning
- [and more]
IMLS on **21st Century Skills**

- Critical thinking & problem solving
- Creativity & innovation
- Communication & collaboration

- Visual, scientific, numerical cross-disciplinary & basic literacy
- Information, media & technology skills
- Financial, global, environmental, civic & health literacy
- Life & career skills, e.g. flexibility, initiative
Media Education for the 21\textsuperscript{st} Century
(Selected from \textit{Jenkins})

- **Play**: the capacity to experiment with one’s surroundings as a form of problem-solving
- **Collective Intelligence**: the ability to pool knowledge and compare notes with others towards a common goal
- **Judgment**: the ability to evaluate the reliability and credibility of different information sources
- **Distributed Cognition**: the ability to interact meaningfully with tools that expand our mental capacities
<table>
<thead>
<tr>
<th>IMLS</th>
<th>Davidson</th>
<th>Jenkins</th>
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<tbody>
<tr>
<td>Critical thinking &amp; problem solving</td>
<td>Attention; Critical consumption of information; Learning, Unlearning &amp; Relearning; Assessment</td>
<td>Judgment; Multi-tasking; Distributed cognition</td>
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<tr>
<td>Creativity &amp; Innovation</td>
<td>Design; Procedural literacy; Storytelling</td>
<td>Performance; Play; Simulation; Appropriation</td>
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<tr>
<td>Communication &amp; collaboration</td>
<td>Collaboration; Participation; Network awareness; Global consciousness; Digital divides; Ethics</td>
<td>Collective Intelligence; Transmedia Navigation; Networking; Negotiation</td>
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Key Skills Employers Are Looking For

Collaboration
Communication
Problem-solving
Information fluency
Project mgt.

NACE’s Job Outlook 2012 survey,
http://www.naceweb.org/s10262011/candidate_skills_employer_qualities/

<table>
<thead>
<tr>
<th>Skill/Quality</th>
<th>Weighted average rating*</th>
</tr>
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<tbody>
<tr>
<td>Ability to work in a team structure</td>
<td>4.60</td>
</tr>
<tr>
<td>Ability to verbally communicate with persons inside and outside the organization</td>
<td>4.59</td>
</tr>
<tr>
<td>Ability to make decisions and solve problems</td>
<td>4.49</td>
</tr>
<tr>
<td>Ability to obtain and process information</td>
<td>4.46</td>
</tr>
<tr>
<td>Ability to plan, organize, and prioritize work</td>
<td>4.45</td>
</tr>
<tr>
<td>Ability to analyze quantitative data</td>
<td>4.23</td>
</tr>
<tr>
<td>Technical knowledge related to the job</td>
<td>4.23</td>
</tr>
<tr>
<td>Proficiency with computer software programs</td>
<td>4.04</td>
</tr>
<tr>
<td>Ability to create and/or edit written reports</td>
<td>3.65</td>
</tr>
<tr>
<td>Ability to sell or influence others</td>
<td>3.51</td>
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</tbody>
</table>

*5-point scale, where 1=Not important; 2=Not very important; 3=Somewhat important; 4=Very important; and 5=Extremely important

Source: Job Outlook 2012, National Association of Colleges and Employers
How does the Gettysburg Curriculum support 21st century learning?

- Multiple Inquiries
- Integrative Thinking
- Effective Communication
- Informed Citizenship
HOW MIGHT WE FOSTER 21\textsuperscript{ST} CENTURY SKILLS AND LITERACIES?

http://www.flickr.com/photos/avl42/5320538385/
Learning Science: Establishing Effective Learning Environments

**How People Learn** (Bransford, et al.)

- **Learner-centered**: consider learner’s motivation, experience, misconceptions
- **Knowledge-centered**: focus on key concepts & mastery
- **Community-centered**: establish community, connect learning to real world
- **Assessment-centered**: both students & teachers monitor progress & adjust learning strategies

High Impact Educational Practices (Kuh)

- First-Year Seminars and Experiences
- Common Intellectual Experience
- Learning Communities
- Writing-Intensive Courses
- Collaborative Assignments and Projects
- Undergraduate Research
- Diversity/Global Learning
- Service Learning, Community-Based Learning
- Internships
- Capstone Courses and Projects

Slide courtesy Rebecca Frost Davis
“Today, we need **collaboration**, not lectures; we need to learn **concepts**, not singular facts; we need **networking** and socialization, not isolation; we need **interactive learning**, not to sit back and listen.”

http://humanistica.ualberta.ca/who-we-are/bloomsburg-u-undergraduate-manifesto-on-digital-humanities/
Making Learning Authentic: **Social Pedagogies** (Randy Bass)
Hands-on, Problem-Based Learning: Studio Learning

• Students tackle design problems, often in groups
• There is no one solution
• Peers and instructors provide feedback
• Students can revise projects
• Promotes active, collaborative learning

http://www.flickr.com/photos/jonnygoldstein/6848800955/in/photostream/
Let’s talk…

- What approaches make sense?
- What other approaches would you recommend?
WHAT IS DIGITAL PEDAGOGY?
Defining Digital (Humanities) Pedagogy

• “engaged and reflexive practice and scholarship of teaching and learning through digital technologies.” (THATCamp Liberal Arts 2012)

• Typical features:
  – Brings together theory and practice, making and thinking
  – Fosters creativity, play and problem solving
  – Encourages participation, collaboration and public engagement
  – Aims to increase critical understanding of digital environment
Syllabus Study: Common Features of DH Classes

- Student projects
- Collaboration
- Blogs & other social networking
- Bringing together theory and practice

See “Undergrad DH Projects” for a growing list of examples

Stop Calling It “Digital Humanities,” 
Start Calling it “Digital Liberal Arts”? 

Bill Pannapacker on why DH works for liberal arts colleges: 
• more nimble & collegial 
• more focused on teaching 
• greater community engagement 
• emphasis on student/ faculty research collaborations 

Rafael Alvarado on why he prefers “digital liberal arts” 
• focuses on “playful encounter of humanists w/ technology” 
• includes arts & sciences 
• “explicitly residential and dialogical” 
• emphasizes pedagogy as well as research
Mills Kelly, “The History Curriculum in 2023”:

- **Making**: make learning active & creative
  - Makerspace with 3D printing
  - Digital storytelling
- **Mining**: teach students how to deal with abundance
  - Experiment with n-grams
- **Marking**: ensure that students know basic coding
  - Organize, analyze, present data
- **Mashing**: enable students to combine sources in creative presentation
  - Digital maps
Cathy Davidson’s Proposal for Reshaping Liberal Education for the 21st C

“Foundational First Year”:  
- cluster of interdisciplinary, problem-based courses  
- mix of online courses, tutorials & seminars

“Experiential Second Year”:  
- solve real-world problems: entrepreneurial service learning  
- students share ideas & questions in online community

A Core Curriculum To Create Engaged Entrepreneurs

written by: Cathy Davidson

It’s time to transform the focus, mission, and rhetoric of liberal arts and combine its focus on cross-disciplinary critical thinking with real world experience. Here’s one proposal.
What do digital humanities have to do with 21\textsuperscript{st} Century Liberal Education?

<table>
<thead>
<tr>
<th>Core Skill</th>
<th>Digital Approaches</th>
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<tbody>
<tr>
<td>Critical thinking</td>
<td>• Evaluating information</td>
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<tr>
<td></td>
<td>• Using digital tools to discern patterns in cultural information</td>
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<td></td>
<td>• Developing informed understanding of digital tools &amp; media</td>
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<tr>
<td>Creativity</td>
<td>• Creating collections, media, methods</td>
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<td></td>
<td>• Solving problems as part of that work</td>
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<tr>
<td>Communication &amp; collaboration</td>
<td>• Exploring multimodal communication</td>
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<td></td>
<td>• Engaging in collaborative work</td>
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<tr>
<td></td>
<td>• Participating in service learning</td>
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</table>
Let’s talk...

• What concerns do you have about digital learning?
• What advantages do you see?
• What are some strategies for promoting digital learning at Gettysburg?