



[Samuel Huron](#)

Shaping (Digital) Scholars: Design Principles for Digital Pedagogy

Lisa Spiro
August 12, 2014

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Driving Questions

- How can **digital research methodologies** be used to improve **undergraduate engagement**?
- What are the best methods for teaching students **digital skills** so that they can participate in the **creation of digital research**?
- How can faculty members shift from transmitting knowledge to **facilitating projects, co-inquiring and co-learning** with students in activity-centered projects?

[Digital Pedagogy and the Undergraduate Experience](#)

My colleagues and I are on a quest...



....to understand the skills important to digital scholarship

Defining Terms

Digital scholar: “someone who employs **digital**, **networked** and **open** approaches to demonstrate specialism in a field” ([Weller](#))

Digital pedagogy: “engaged and reflexive practice and scholarship of teaching and learning through digital technologies.” ([THATCamp Liberal Arts 2012](#))

What are three things that researchers need to know in the digital age?

Inspired by [Cathy Davidson](#)

From Learning About to Learning to Be



Sund, ["UCLA School of Medicine"](#)



[Wikimedia Commons](#)

See [Brown & Adler](#)

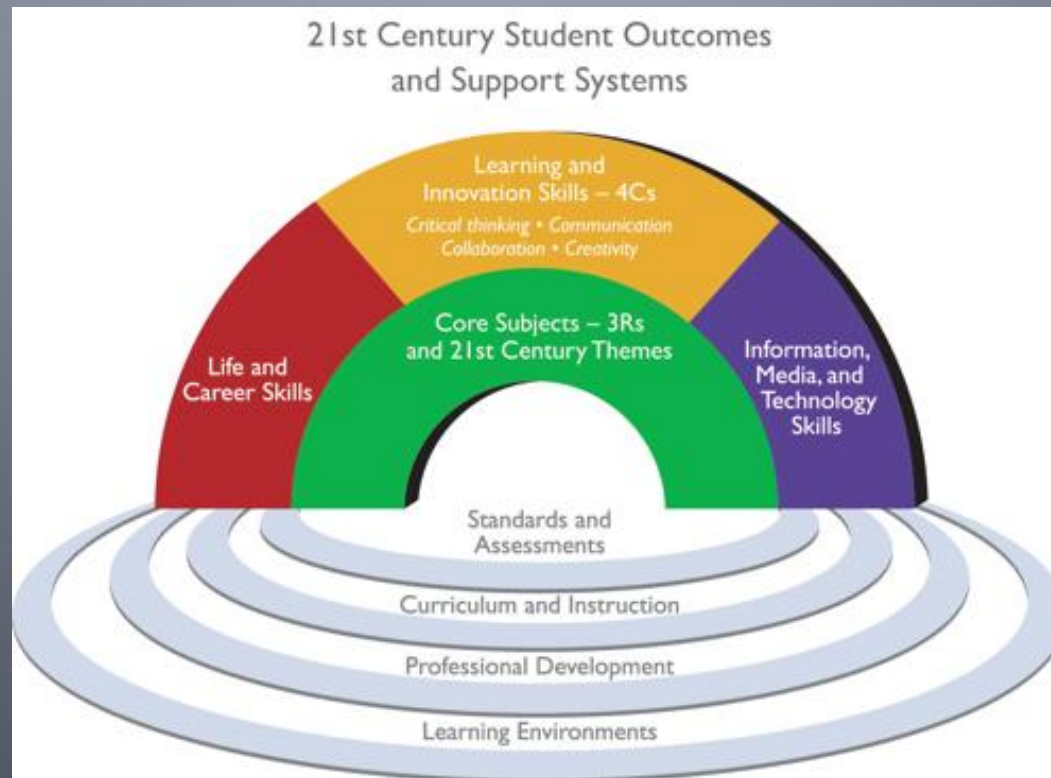
Outline for Today's Workshop: How to Put Digital Pedagogy into Practice

- I. Define what students need to know: *What are we trying to do?*
- I. Sketch preliminary design principles & provide concrete examples: *How do we do it?*
- II. Discuss obstacles: & practical solutions: *What obstacles should we anticipate?*
- I. Draft assignments: *Let's put this into action.*

Overall objective: *Experience the ethos of digital pedagogy: learning by doing and reflecting, collaboration, play*

I. Defining What Students Need to Know

(Or What We Want Them to Become)



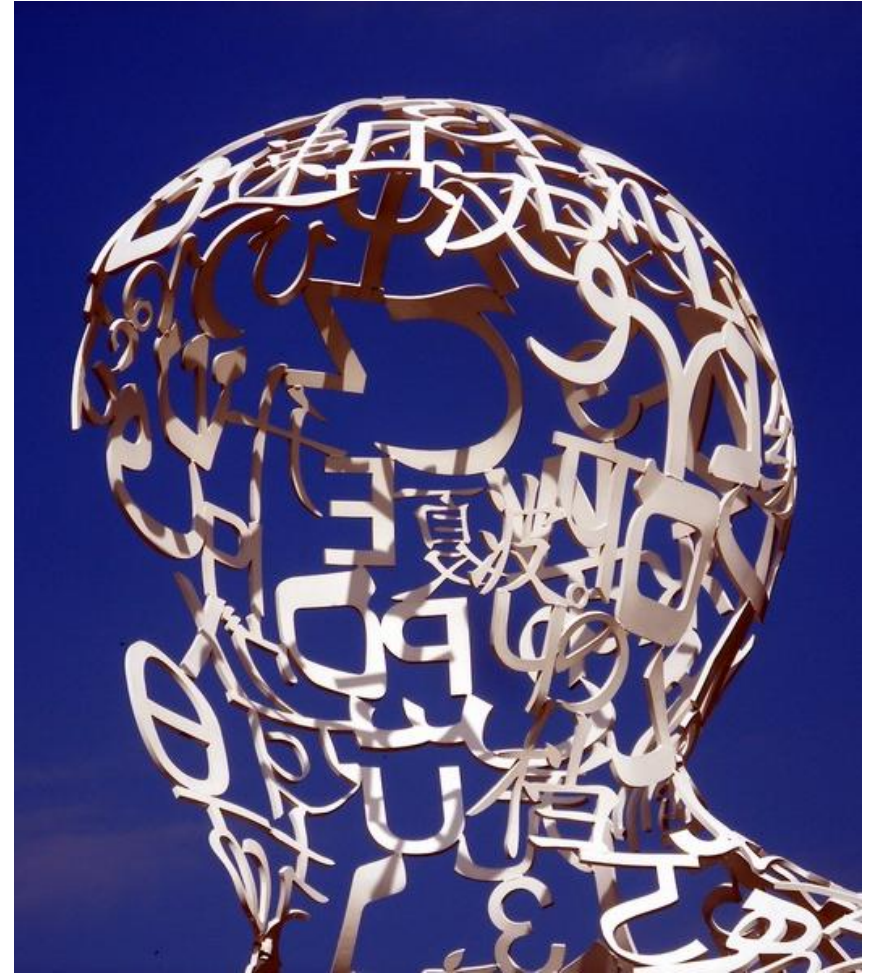
What do digital scholars need to know?

- How to approach research questions and understand research methods
- How to collaborate across disciplines and roles
- How to apply technical skills to create and share new knowledge, e.g. database design, web design, GIS, text markup
- How to manage projects

Initial findings of Digital Scholarship Skills Study

What habits of mind do digital scholars demonstrate?

- Openness and flexibility
- Continuous learning
- Creativity
- Collaboration




See [Costa and Kalick](#)

Anders Sandberg, ["Open mind"](#)

A Framework for Twenty-First Century Skills

<u>Partnership for 21st C Skills</u>	DS Skills Study
Critical Thinking/ Problem Solving	<ul style="list-style-type: none">• Exploring research questions• Applying technical skills to problem-solving
Creativity & Innovation	<ul style="list-style-type: none">• Creativity• Flexibility
Communication & Collaboration	<ul style="list-style-type: none">• Collaboration

See also [Clement; Assessment and Teaching of 21st Century Skills](#)



Of course, learning isn't just about developing skills. It's also about...

- Cultivating curiosity & wonder
- Inspiring passion
- Shaping selves (even [souls](#))

II. Preliminary Design Principles for (Digital) Pedagogy



1. Hands-on/ Minds-On: We learn by making, connecting theory and practice.



2. Social & Networked: We learn by sharing our questions and understanding with each other and the network.



3. Playful: We learn through play and experimentation.

Sources of These Design Principles

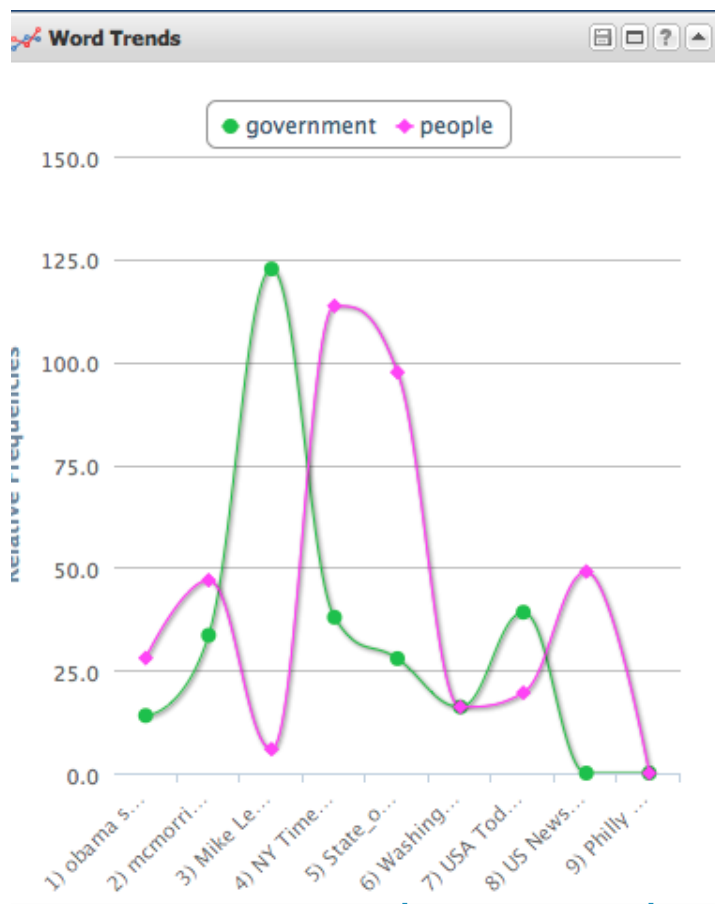
- My 2011 [study](#) of digital humanities syllabi and further work synthesizing trends in DH classes
- Analysis of model programs (e.g. [Praxis](#))
- Research into learning science (e.g. [How People Learn](#)) and [digital pedagogy](#)
- Other learning principles (e.g. [Connected Learning](#))



1. Hands-on/ Minds-On: We learn by making and reflecting, connecting theory and practice.

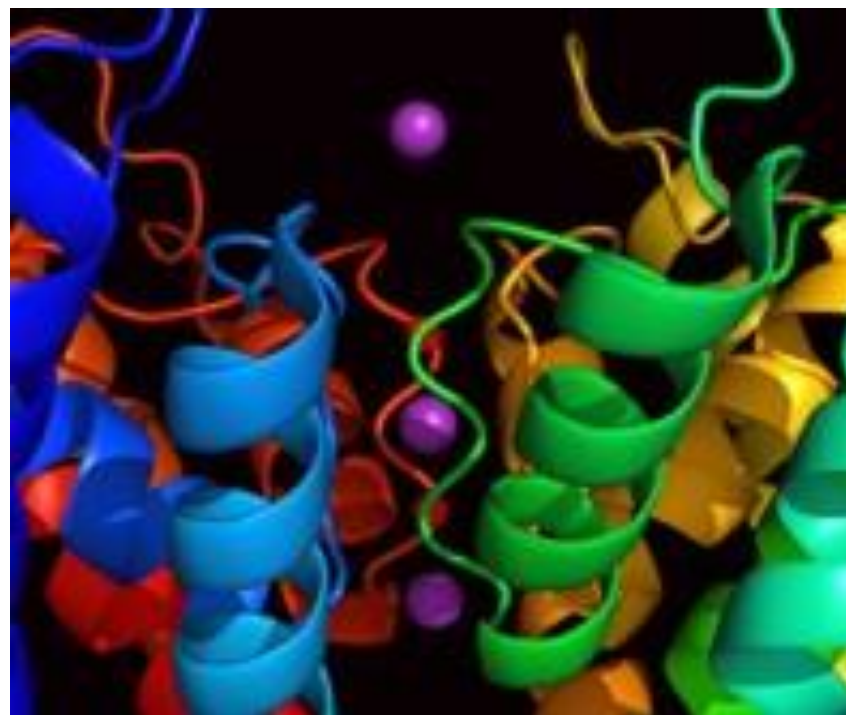
Examples of Hands-On Digital Learning from Yesterday

Simple Text Analysis



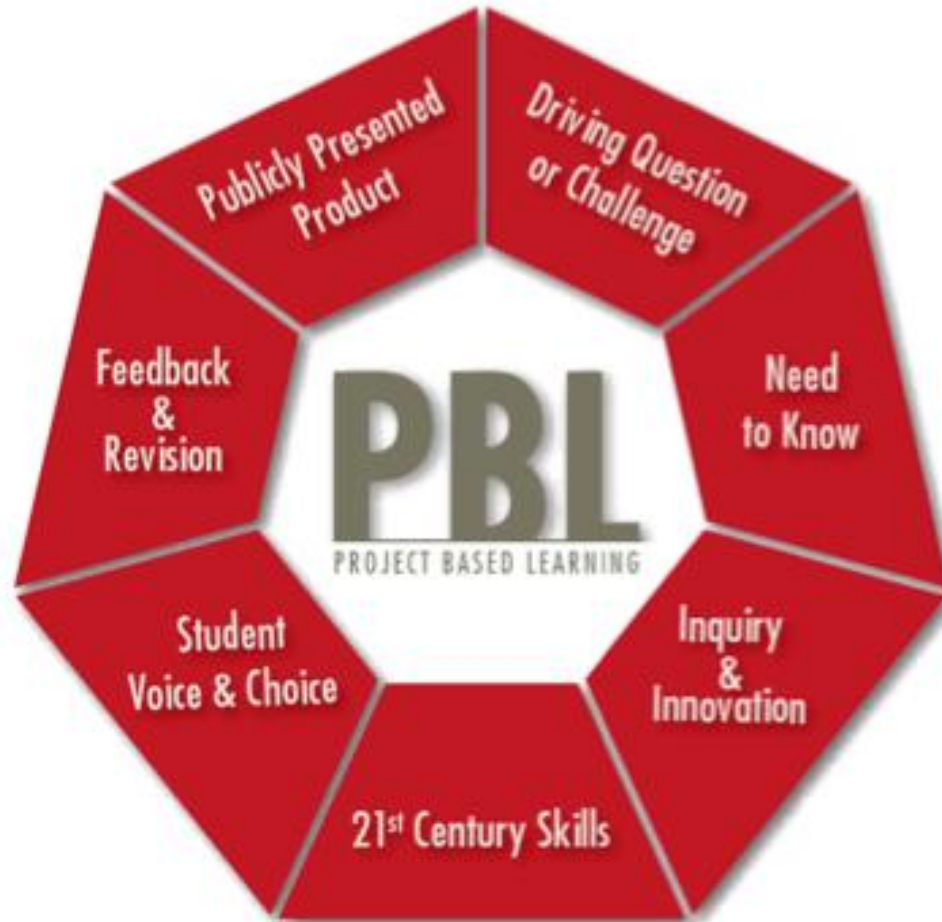
[Boyd & Humphries](#)

Interactive 3D Models of Molecules



[Hadzovic](#)

Digital Pedagogy Often Involves Project-Based Learning



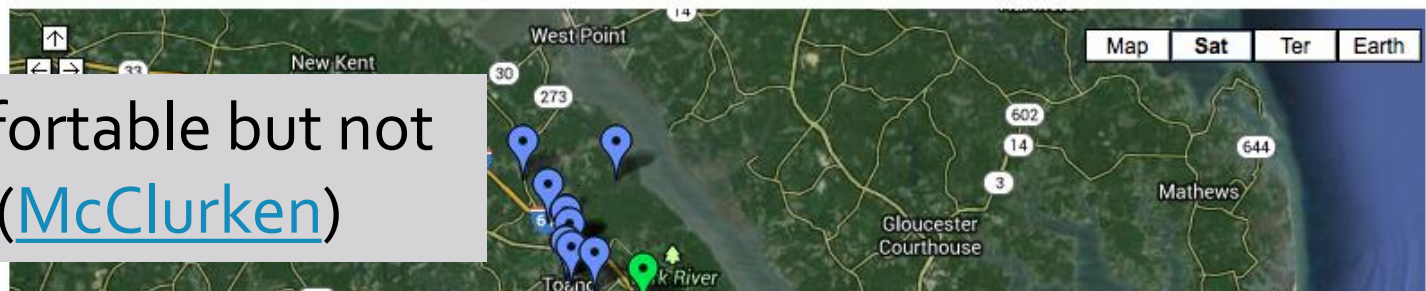
Creating Digital History by Building Digital Archives

Southeastern Virginia Historical Markers

*The Historical Highway Markers of
Three Southeast Virginia Counties*



Map of Historical Markers



“be uncomfortable but not paralyzed” ([McClurken](#))

<http://sevamarkers.umwblogs.org/>

Why Project-Based Learning?

- Improves critical thinking as students figure out how to solve problems.
- Develops students' sense of responsibility and confidence.
- Students retain learning longer.
- Hones students' skills at collaboration.

See [Center of Excellence in Leadership of Learning](#)

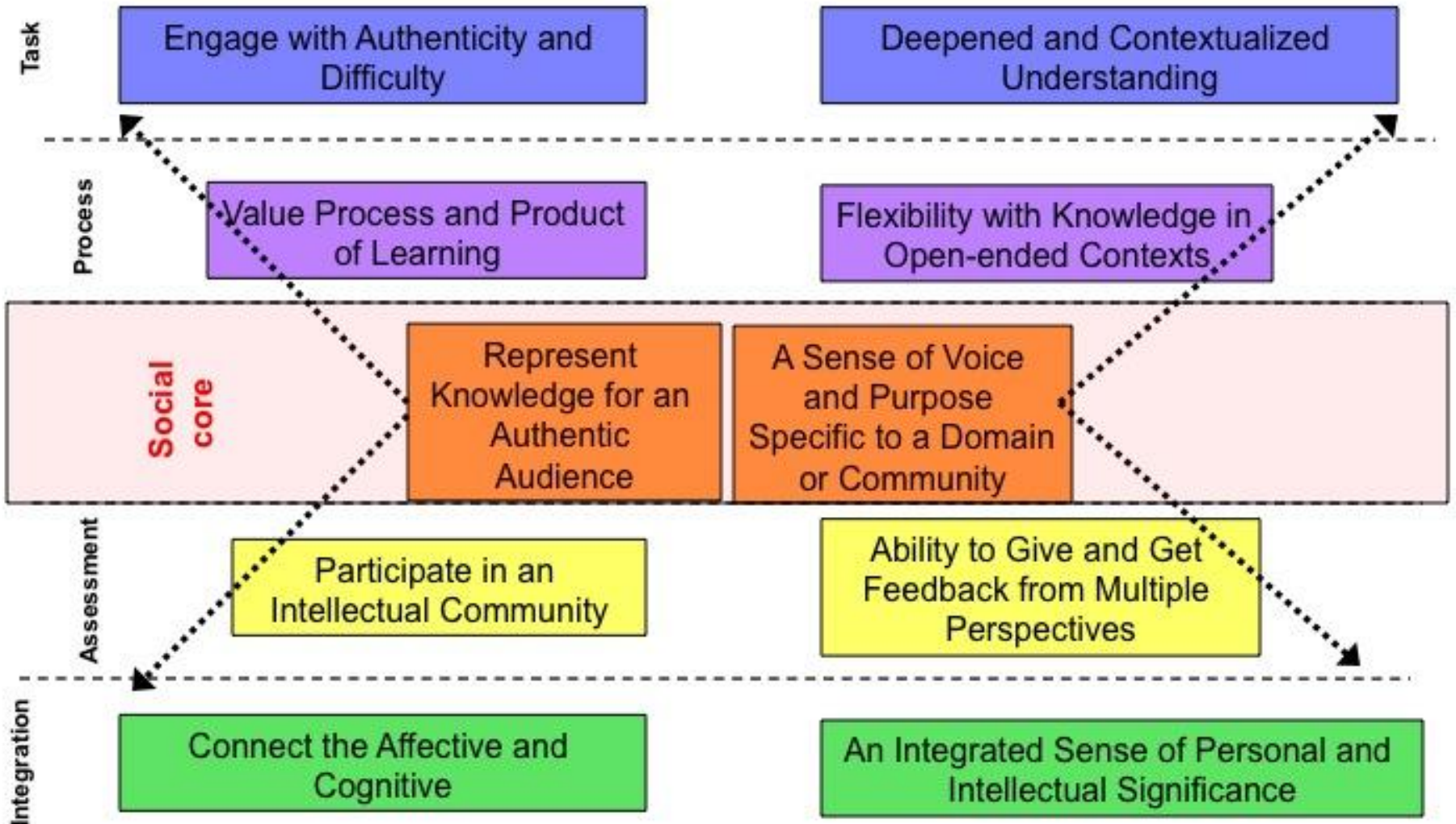
2. Social and Networked: We learn by sharing our questions & understanding with each other & the network.



Social Pedagogies: Design Elements & Goals

Create opportunities for students to:

Such that they develop:



Learning as a Research Team: Digital Ethnography

The screenshot shows a web browser interface. At the top, there is a navigation bar with the text "Mediated Cultures: Digital Ethnography at Kansas State University" and a user profile for "Michael Wesch" with "Sign Up" and "Sign In" options. Below this is a sidebar with "Digital Ethnography" and "The Wall" tabs. The main content area is titled "Video Drafts Discussion" and includes a rich text editor with a menu (File, Edit, View, Insert, Format, Tools, Table, Help) and a toolbar. The text in the editor reads: "Video Drafts Discussion Day One", "Caitlyn: [http://www.youtube.com/watch?](\"http://www.youtube.com/watch?\")", and a list of notes: "<3 pedagogy", "good business quote to be used later, in good music transition initially", "Example of how education is ineffective (Say something about/during the girl on the I like the music... make it a bit softer when Who is the British Punk rocker? Please to I like the transition to the different 'ages'. If Dewey gets used here, should it be less Need to identify Postman sooner (possibly Could cut Postman to be a bit shorter". A video player is embedded in the text, showing a handwritten note on a piece of paper that says "Public space" and "We want to be known." The video title is "Anonymity Project: The PostSecret Effect" by "kzhines" with 175,751 views and a "Subscribe" button.

http://www.netvibes.com/wesch#Digital_Ethnography

Digital Ethnography 2013/ 2014: Participation, Empathy & Media Creation

To Live in this World

BY WESCH · JUNE 17, 2014



by Jordan Thomas and Kenzie Wade, Digital Ethnography Class of 2014

<http://mediatedcultures.net/videos/to-live-in-this-world-3-things/>

Networked Pedagogy: Looking for Whitman



LOOKING FOR WHITMAN ▾ LOG IN ▾ SIGN UP ▾

LOOKING FOR
WHITMAN

The Poetry of Place in the Life and Work of Walt Whitman

A multi-campus experiment in digital pedagogy sponsored by the NEH Office of Digital Humanities

HOME COURSES PROJECTS DIRECTORIES ABOUT SUPPORT

Walt Whitman and the Levi's Ad Campaign: A Provocation, A Challenge, and an Invitation

Nov 11th, 2009 by Matthew Gold. No comments yet

This is the first in a series of posts on The Vault, a new conversational space in the Looking for Whitman project that is devoted to creating public conversations about Walt Whitman and his work.

Subscribe to our Feed via RSS

Who's Online Avatars

“experiment in multi-campus digital pedagogy”
([Jim Groom](#))

<http://lookingforwhitman.org/>

3. **Playful:** We learn through play and experimentation.



Open, Playful, Networked Learning:

DS 106

The screenshot shows the DS106 website homepage. At the top left is the large, stylized logo 'DS'106'. To its right is a navigation menu with links: 'Home', 'About', 'Open ds106 Course', 'Other ds106es', and 'Components'. Below the navigation is a main content area with three columns. The left column features a 'KEEP CALM AND DS'106 ON' graphic with an open book icon. The middle column shows a promotional image for 'DS 106 and the TWO WEEK BOOTCAMP' featuring a man in a hat holding a whip. The right column shows two smaller promotional images: one for 'ZERO' with the text 'FOR TEN YEARS ONE WOMAN NEVER STOPPED SEARCHING FOR THE MOST WANTED MAN IN HISTORY' and another for 'WHY DO WE TWEET?' featuring a Twitter bird logo. Below the main content area is a dark grey footer with the text 'Ready to Get Started? Start any time, it never ends. Design it your way.' and two buttons: 'Welcome to Camp Magic Macguffin' and 'Get Info'.

“The very essence of ds106 is that it is made of the same stuff that the web is made of, a distributed, open, decentralized connected network managed by participants in the space it inhabits.”

([Alan Levine](#))

How ds106 Changed My Life

Posted by [coqdog](#) | December 29, 2012



Giulia Forsythe explains and draws visually the effect ds106 has had on her life. See [her blog post](#) for the full story.

<http://ds106.us/2012/12/29/how-ds106-changed-my-life-2/>

DS106: creativity, culture, community

Ludic Learning (Liu): Literature+

Literature+

New Media & Literary Interpretation:
Close, Distant, and Other Reading

Graduate Course - Winter 2012
Instructor: Alan Liu
UC Santa Barbara
Thur 2:00 - 4:30 pm, South Hall 2509



Digital methods
methods of literary
interdisciplinary
theoretical and
studies to study
"distant reading"
component of
mapping, etc.

The course is
readings and
project that u
students may
story or poem
database, gar
tasks: discover
project. (Audi

"students are *hungry* for studio- or lab-style environments where they work shoulder-to-shoulder with humanities professors. In Literature+ courses, the main 'content' delivered is actually the role-model and working habits of an intellectual pursuing humane knowledge with all best passion, skill, and openness to collaboration with others, including students."

Liu, "Literature+"

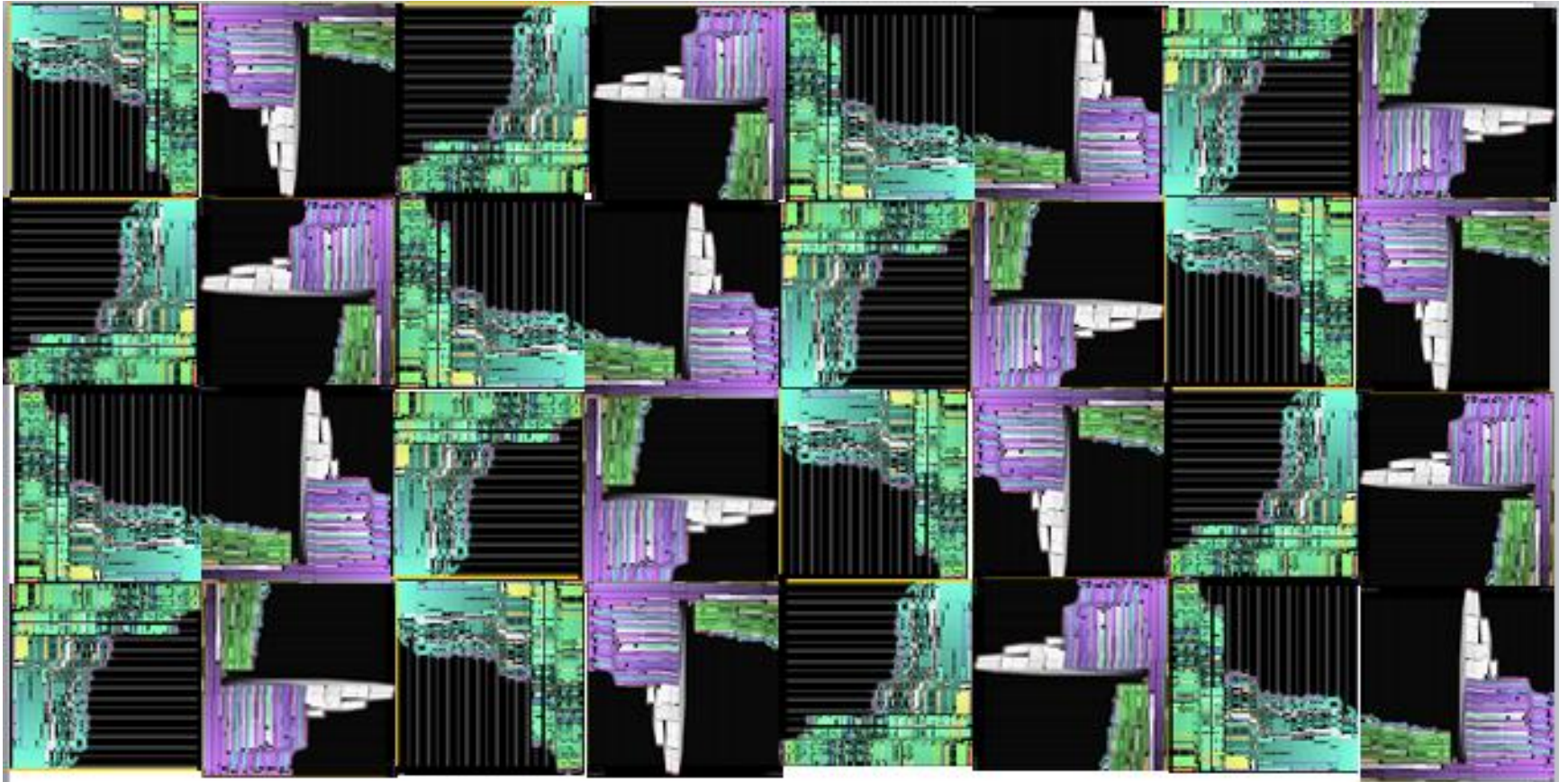
Literature+ Assignment

- **Team Project:** “Each team will design a project exploring one of the alternative paradigms of literary interpretation discussed in the course (e.g., text analysis, data mining, graphing, mapping, modeling, simulating, gaming, deformance, etc.).”
- **Product:** well-documented prototype
- **Individual components:**
 - student bio
 - annotated bibliography
 - 4 pp. research report on item in bibliography
 - 8 pp. essay

Examples of Literature + Projects by Graduate & Undergraduate Students

- [Canterbury Blogs](#): converting the Canterbury tales into a blog to highlight social connections
- [The Emigrants Project](#): mapping Sebald's novel using Google Earth
- [The Textones Project](#): audio modeling of Shakespeare's sonnets

Student Project: Ludic Analytics



Claire, History Flow "quilt" of English and Spanish Wikipedia pages José Agustín

Why Is Play Important?

- Motivates through immersion
- Gives freedom to experiment, explore, fail & try again
- Opens up new possibilities & roles
- Sparks imagination and transformation

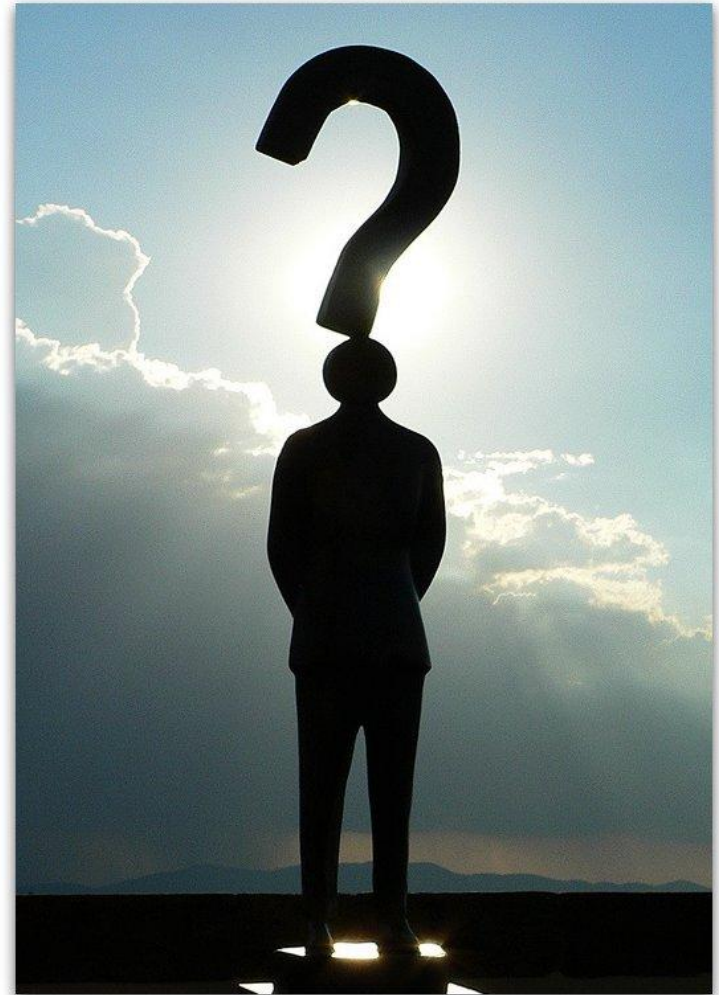
See [Jenkins](#); [Brown & Thomas](#); [Kraus](#); & [Harris](#)



[Ed Yourdon](#), [Play Me, I'm Yours Austin](#)

Questions for You...

- Are these appropriate design principles?
- What role does the digital play in these approaches to learning?
- What other examples of these principles can you think of?





<http://www.flickr.com/photos/jonlucas/204213403/>

III. Challenges and Opportunities

Two Challenges for Digital Pedagogy

1. Helping students develop tech skills
1. Evaluating student work

1. Helping Students Develop Tech Skills

- [Survey](#) students to understand their skills and needs
- Use simple, freely available tools
 - See [DiRT](#) (Digital Research Tools) for examples
- Offer [labs](#) and tutorials focused on particular skills
- Partner with IT and the library for support
- Appoint [student tech mentors](#)
- Turn to the network, e.g. [Digital Humanities Questions & Answers](#)

Developing Skills and Critical Understanding through Labs

The Digital Historian's Toolkit

Studying the West in an Age of Big Data

COURSE DESCRIPTION

POLICIES AND PROCEDURES

EVALUATION

SCHEDULE ▾

RESOURCES ▾

Labs

Lab #1: Working With Maps

Students will learn how to georeference a historical map, create new feature classes of topographic data, and perform spatial analysis with existing data.

- [Assignment](#)
- [Data](#)

Lab #2: Working With Text

Students will explore how to process and OCR text from an Overland Trail diary, evaluate the quality of the text, and perform basic textual analysis using online tools.

- [Assignment](#)
- No data needed

Lab #3: Spatial Data

Students will use a historical document to create and then interrogate a spatial database of historical infrastructure.

- [Assignment](#)
- [Data](#)

Goals:

- Develop students' skills in GIS, text analysis & design
- Use these skills to explore bigger questions & develop critical awareness
- Learn by doing—active, reflective

Blevins, [Learning by Doing: Labs and Pedagogy in the Digital Humanities](#)

Elements of an Effective Lab Assignment

- **Define the goals**
 - Examine a historical map & data to create argument about race & space
- **Offer clear instructions**
 - “preview the **DenverED** file in ArcCatalog”
- **Prompt critical reflection through questions**
 - “What kinds of information does it display?”
- **Encourage independent inquiry**
 - “Brainstorm **potential questions** you could ask of the data and how you would answer it. “

More Elements of an Effective Lab Assignment

- **Promote social learning**
 - “Once you have come up with a question, you will explain it to the group and **solicit feedback or ideas** for possible ways to analyze and visualize it.”
- **Suggest evaluation criteria**
 - “Do you need labels or legends to convey your argument?”
- **Encourage reflection and synthesis**
 - Write lab report describing your argument, its significance, your process, any challenges, and choices made

2. Evaluation: Use a Group Contract to Make Students Responsible

Mary Ball Washington Contract

Ball Washington Group Contract

History 471C3

Members

rndt

Donnelly

inie Lefferts

ilson

Part I – Mission Statement

The purpose of our website is to educate the University of Mary Washington community on who Mary Ball Washington was and why she is important. Through a survey of the UMW student body, we have found that students know that Mary Ball Washington was the mother of our country, but when asked why she was important not many people could provide information. Our group aims to produce a website that follows the

Components:

1. Mission statement
2. Tools
3. Division of labor & structure
4. Milestones

Features:

- Check in points
- Individual reflections

<http://dh2010.umwblogs.org/group-contracts/mary-ball-washington-contract/>

Use Authentic Assessment (e.g. Criteria for a Grant Application)



NATIONAL ENDOWMENT FOR THE
Humanities

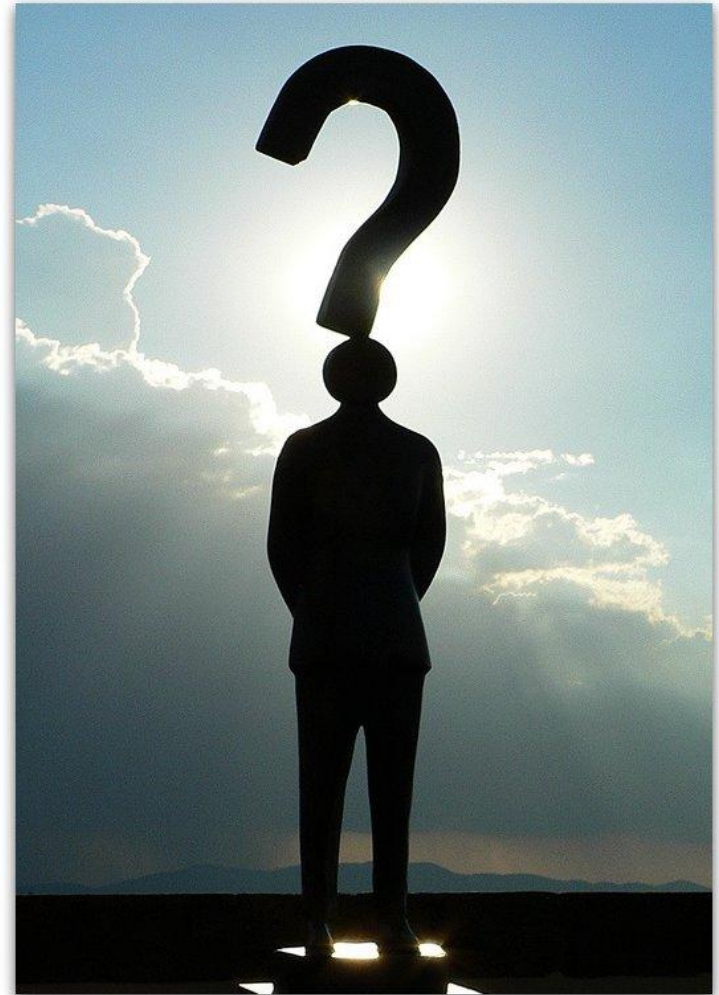
OFFICE OF **DIGITAL HUMANITIES**

DIGITAL HUMANITIES
START-UP GRANTS

Deadline: September 11, 2014 (for projects beginning May 2015)

Questions for You...

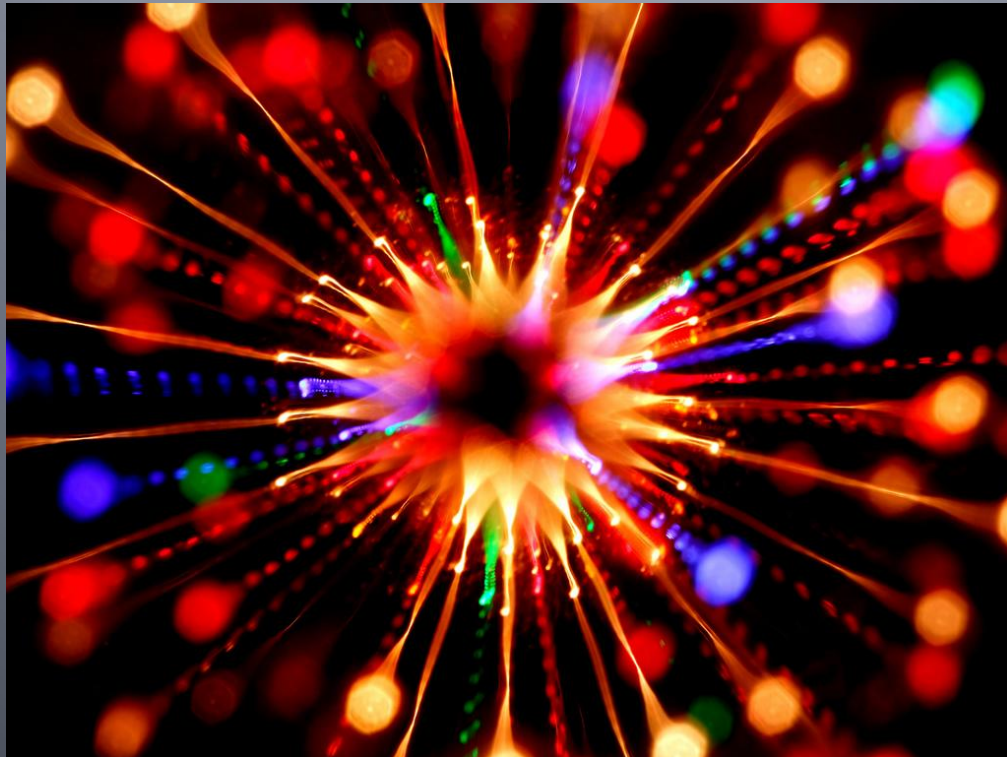
- What are some other challenges facing digital pedagogy?
- What are other strategies for dealing with these challenges?



Why Pursue Digital Pedagogy? Student Perspectives on Becoming Digital Scholars

- “This seminar has allowed me to **grow and mutate** in directions I had never envisioned as a scholar....I emerge from this seminar with a reawakened energy for scholarship...” (Ludic Analytics student)
- “To have the ability to **participate** in something that is both an **experimental learning environment** and on the **forefront of historical research** is a very exciting prospect.” (Digital History student)

IV. Putting Principles into Practice: Creating Assignments



Your Mission: Create a Digital Assignment

- In teams, sketch out a prototype for a digitally-inflected assignment that realizes at least one of the design principles we've explored

<http://tinyurl.com/DPAassignment>

- Download these slides from <http://digitalscholarship.wordpress.com/>

Selected Resources

- [*Digital Humanities Pedagogy*](#)
- Harris and Sayers, [Digital Pedagogy](#)
- [*Hybrid Pedagogy*](#)
- [*Journal of Interactive Technology and Pedagogy*](#)
- [*Learning Through Digital Media*](#)
- [Pedagogy](#) on DH Questions & Answers
- [*ProfHacker*](#)
- [SERC Pedagogy in Action](#)
- [UCLA Intro to Digital Humanities](#)
- DH Education Zotero [collection](#)
- Lisa's [digital pedagogy](#) & [digital humanities pedagogy](#) bookmarks

Thanks!



Get in touch:
lisamspiro@gmail.com

[thank you note for every language](#)