Teaching Digital Humanities Methods Online: Blending cloud-based solutions with project-based learning to develop 21st Century skills

OLC Accelerate Discovery Session, 2021
Dr. Sarah Ketchley & Dr. Lindsey Gervais
Digital Humanities: Opening doors for humanities scholars
Frameworks for Teaching and Learning Digital Humanities
Frameworks for Teaching and Learning Digital Humanities

Gold Standard PBL
Seven Essential Project Design Elements

- Sustained Inquiry
- Authenticity
- Challenging Problem or Question
- Public Product
- Reflection
- Critique & Revision
- Student Voice & Choice

LEARNING GOALS
- Key Knowledge
- Understanding
- Success Skills

John Larmer, John Mergendoller, Suzie Boss (ASCD 2015)
Course Development with Text & Data Mining Research

A new look at scope and sequence

Project-based Learning integrative courses:
• Incorporates the use of digital tools and research methodologies
• Explore, investigate, and think about complex questions or phenomena throughout the span of a course.
• It often times is very inquiry-focused and collaborative.
• It’s more than just doing a project; it is facilitating key critical thinking and project management skills that are necessary to develop inferences about the product at the end.
Course Development with Text & Data Mining Research

DH Course and unit objectives

Humanities course and unit objectives

DH Unit and Learning Objectives

Project-Based Learning Tasks & Skills
21st Century Skills in Digital Humanities

Digital
- Coding & technology
- Collaboration
- Project Management
- Iterative & experimental projects
- Developing accessible & sustainable digital tools, projects & archives

+ Humanities
- Critical thinking
- Verbal & written communication
- Cultural awareness
- Curiosity
- Empathy

Career Readiness
# Theory to Practice: Digital Humanities in the Classroom

## Learning Management System
- Course Organization
- Discussion Boards
- Assignments
- Rubrics and Grading
- Calendar

## Digital Humanities tools
- Voyant Tools
- Jupyter Notebooks
- Storymap/Timeline.js
- Lexos
- OpenRefine
- AntConc
- Gephi
- Geoparsers

## Other Collaboration tools
- Github
- Omeka
- Scalar
- Slack
- Zoom
- Notion
Classes & Outcomes

● No prerequisites
● Engagement with primary sources
● Foster core computing competencies for humanities and social science students
● Promote interdisciplinarity and collaboration
● Use digital tools to investigate humanities data
Project Planning

Data Collection & Curation

Analysis & Visualization

Final project

Project Planning

Data Collection & Curation

Analysis & Visualization

Final project
# Learning Objectives

<table>
<thead>
<tr>
<th></th>
<th>Basic</th>
<th>Advanced</th>
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<tbody>
<tr>
<td><strong>Digital Humanities</strong></td>
<td>- Understand the fundamentals of the digital humanities and the mechanisms which drive the ethos.</td>
<td>- Synthesize prior knowledge with principles of digital humanities to create research questions.</td>
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<td></td>
<td></td>
<td>- Apply what is known to a hands-on research practicum with Gale's Digital Scholar Lab.</td>
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<tr>
<td><strong>Primary Source Digital Literacy</strong></td>
<td>- Understand and recognize the value and purpose of primary sources in developing an active practice towards digital literacy and citizenry.</td>
<td>- Apply prior learnings about the use of primary sources to answer questions relevant to phenomena in today's society—both past and present.</td>
</tr>
<tr>
<td><strong>Digital Archives Intelligence</strong></td>
<td>- Describe how archives are put together as a set of primary sources. Create inferences about their value in the research process.</td>
<td>- Develop an understanding of the use cases for archives, their attributes, and their use cases within digital humanities.</td>
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<tr>
<td><strong>Digital Literacy</strong></td>
<td>- Review, revise, and evaluate information presented in a range of digital media. - Recognize how the source and its transfer to digital impact the reliability and validity of the content in digital format. - Understand the ethical/legal issues surrounding the access and use of digital media, including copyright, ownership, licensing, and use of proprietary content or software.</td>
<td>- Engage creatively with a range of digital media and multiple systems to present information effectively to a given audience. - Edit and improve the content that others have created while also respecting and acknowledging the rights of the original author.</td>
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## SAMPLE SYLLABUS

### COURSE SCHEDULE

<table>
<thead>
<tr>
<th>MODULE 1: Welcome</th>
<th>Topic 1</th>
<th>Welcome &amp; Orientation: Syllabus Review, Assessment, Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topic 2</td>
<td>What is DH? Exploring DH Projects</td>
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<tr>
<td></td>
<td>Topic 3</td>
<td>Evaluating Digital Projects</td>
</tr>
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<td></td>
<td>Topic 4</td>
<td>Copyright &amp; Open Source Materials</td>
</tr>
<tr>
<td></td>
<td>To Do:</td>
<td>Discussion &amp; Replies; evaluating DH projects assignment</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>MODULE 2</th>
<th>Topic 1</th>
<th>What is Text &amp; Data Mining in the Humanities?</th>
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<tbody>
<tr>
<td></td>
<td>Topic 2</td>
<td>Gale Primary Sources: an Overview</td>
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<td></td>
<td>Topic 3</td>
<td>Class Research Topics</td>
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<td></td>
<td>Topic 4</td>
<td>How to: Digital Scholar Lab</td>
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<td></td>
<td>Topic 5</td>
<td>How to: StoryMapJS</td>
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<tr>
<td>To Do:</td>
<td></td>
<td>Discussion &amp; Replies; Identifying a topic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODULE 3</th>
<th>Topic 1</th>
<th>What is Optical Character Recognition (OCR)?</th>
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<tbody>
<tr>
<td></td>
<td>Topic 2</td>
<td>Text Cleaning</td>
</tr>
<tr>
<td></td>
<td>Topic 3</td>
<td>Creating Project Documentation and Cleaning Text</td>
</tr>
<tr>
<td>To Do:</td>
<td></td>
<td>Discussion &amp; Replies</td>
</tr>
</tbody>
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<tr>
<th>MODULE 4: Analysis and Visualization</th>
<th>Topic 1</th>
<th>Survey of Text-Mining Tools</th>
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<tr>
<td></td>
<td>Topic 2</td>
<td>nGrams/Term Frequency</td>
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<tr>
<td></td>
<td>Topic 3</td>
<td>Named Entity Recognition</td>
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<tr>
<td></td>
<td>Topic 4</td>
<td>Topic Modeling</td>
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<td></td>
<td>Topic 5</td>
<td>Sentiment Analysis</td>
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<td></td>
<td>Topic 6</td>
<td>Clustering &amp; Parts of Speech Tagging</td>
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<td></td>
<td>Topic 7</td>
<td>Compare with External Tools : Voyant</td>
</tr>
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**Rubrics**

- **Clearly linked to instructions in assignment**
- **Map to learning outcomes**
- **Granular & detailed to guide effective grading**

### Discussion Post and Reply Rubric
You've already rated students with this rubric. Any major changes could affect their assessment results.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ratings</th>
<th>Pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Post: submitted by Tuesday deadline</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>15.0 pts</td>
</tr>
<tr>
<td>Initial Post: addresses all parts of the question</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>15.0 pts</td>
</tr>
<tr>
<td>Initial Post: 200-300 words in length</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>10.0 pts</td>
</tr>
<tr>
<td>Initial Post: includes references to at least 3 reading or video resources</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>15.0 pts</td>
</tr>
<tr>
<td>Initial Post: has been proofread and uses Standard English appropriate for college-level writing with few or no errors.</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>10.0 pts</td>
</tr>
<tr>
<td>Reply Posts: three replies made by Thursday deadline</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>15.0 pts</td>
</tr>
<tr>
<td>Reply Posts: each reply further develops classmates’ posts and ideas or offers additional analysis.</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>10.0 pts</td>
</tr>
<tr>
<td>Reply Posts: concrete examples are used when appropriate to support statements.</td>
<td>This area will be used by the assessor to leave comments related to this criterion.</td>
<td>10.0 pts</td>
</tr>
</tbody>
</table>

Total Points: 100.0
Course Collateral

- Contextual reading and viewing
- Technical documentation & ‘how to’ videos
- Feedback
- Pre-recorded lectures
- Platforms for communication
- Admin documents
Engaging Students in an Online Classroom

- Effective communication
- Multiple methods for engagement
- Clear syllabus and expectations
- Simple flow and structure
- Regular opportunities for students to give and receive feedback
- Interesting end goal which showcases learning and gives a sense of achievement
Choose tools with minimal requirements for setup and ongoing maintenance/troubleshooting

Focus on practical tasks that build cumulatively toward the creation of a final project

Worklogs encourage ‘documentation mindset’ and reflective practices

Partner with librarians/guest faculty to share expertise
Project-Based Learning Outcomes

The ‘Sunday Question’ in the 1893 Columbian Exposition

**Research Question**

What major themes emerge from news publications and editorials across the United States in the years leading up to the opening of the Chicago World’s Fair, and how might the stakeholders be a part of these themes?

**Project Overview**

When selecting a topic, we were drawn to the Chicago World’s Fair because several of us had connections to Chicago and were familiar with the fair’s immense impact on the economy and culture of the city. We sought to better understand the historical context and the role of stakeholders in shaping the fair’s outcomes. Our research involved analyzing news articles and editorials from various sources, as well as primary documents related to the fair, such as the fair’s official publications and internal communications.

After conducting the analysis, we created a thematic map that captured the key themes and stakeholders involved in the fair. This thematic map provided a visual representation of the connections between the various stakeholders and the themes that emerged from our analysis. The map also allowed us to identify the most significant stakeholders and their contributions to the fair’s success.

**About the ‘Sunday Question’**

The ‘Sunday Question’ was a popular feature in many newspapers and magazines during the time leading up to the fair. It was used to engage the public in discussions about the fair and its potential impact on the economy and society.

This thematic map analysis utilized Elie's final clustering configuration (see Data Question page for details). It showed that the most frequently mentioned stakeholders were those involved in the construction and management of the fair. These stakeholders included architects, engineers, and business leaders who were responsible for the fair’s success.

**Topic Modeling Visualizations**

The Topic Modeling analysis revealed that the most important topics were related to the fair’s construction, management, and impact on the economy. Other important topics included the fair’s cultural significance and its role in promoting international trade.

**The Sunday Question: Closure during the 1893 Columbian Exposition**

Using the Sunday Question as a lens, we explored the fair's impact on the economy and society. The fair was a significant event in the history of the United States, and its impact on the economy and society continues to be felt today.

The fair was a major economic event, and it provided a platform for business leaders to showcase their products and technologies. The fair also provided an opportunity for the public to engage with new ideas and technologies, leading to increased innovation and economic growth.

The fair's cultural significance cannot be overstated. It was a major event that brought people from all over the world together to celebrate the achievements of the Western world. The fair's impact on international relations and diplomacy cannot be understated.

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Let’s Continue our Talk!

Use this link or scan this QR code to add your questions, thoughts, and more!

To scan: Open the camera app on your mobile device, put the QR box (shown on the right) in view, then open the internet link that pops up on the top.

https://www.menti.com/ro9twy8siy