How Online Learning Can Reshape the Information Literacy Instruction Landscape
Westminster College/English 110

Approximately 30 English 110 Courses per year
Librarians teach two full class sessions
Quizzes and final assignment worth 5% of English 110 grade
Assignments and assessment in our own corresponding Canvas (LMS) courses
Over the past five years, moved to higher-level learning objectives
  • Use
  • Evaluation
  • Synthesis
  • Topic development
Online instruction

• Three years of online English 110 instruction
  • Then: one summer course
  • Now: three courses per year

• The challenge
  • Interactive
  • Iterative
  • Robust
  • Framework/Threshold Concepts

• Built on work for Competency Based Education modules
The Mountain to Climb

Complicated Assignments in an Online Environment
# Complicated Assignment #1

**Authority is Constructed and Contextual**

<table>
<thead>
<tr>
<th>Citation MLA or APA (Include URL if applicable)</th>
<th>What type of source is this?</th>
<th>Who can create this type of source and what steps does the writer take to create it?</th>
<th>Describe any review process for this type of source. If there isn’t a review process, why not?</th>
<th>How can users locate information in this format?</th>
<th>Rate this type of source from 1-5 (least to most authoritative) and discuss the reasons.</th>
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</table>
Complicated Assignment #2
Scholarship as a Conversation

What would a writer do with this source?

**Background**
- Present Information, Establish Facts

**Exhibit**
- Explicate, Interpret, Analyze

**Argument**
- Affirm, Dispute, Refine, Extend

**Method**
- Critical lens; key terms, theory, style, perspective, discourse

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Reaching the Summit

Community of Inquiry and Instructional Design
Community of Inquiry to the Rescue

- Social Presence
- Cognitive Presence
- Teaching Presence

Garrison, Anderson & Archer 2001
Instructional Design Approach

Backwards Design
1. State with main goal
2. Identify what success is
3. Select or create content

Road map analogy
Select the destination first, then plan your route
Social Presence

“Social presence is the ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves as ‘real people.’” (https://coi.athabascau.ca/)
Social presence & ID

- Creating a social environment
  - Discussion board introductions and ongoing forums
    - Student-led; teacher-led
    - All participate, including instructor
  - Well-made lecture content videos & storytelling
  - Synchronous meetings
    - chat, webinars, phone conferencing, skype
    - Watch online content simultaneously and chat via twitter or Canvas
- Frequent announcements
- Technology
  - Collaborative Wikis (Google Collaborations)
  - Wikispaces
  - Twitter
  - WebEx sessions
  - Discussions

Identify perception of Social Presence
- Teacher perception?
- Student perception?
Social presence & ID

Digital Storytelling
Additional Ideas to add Social Presence

Search any hashtag below:

#informationliteracy

This is great @MyClassTwitter #MyClassHashTag

It's your last day to enter our #whyinfolit competition! £100 voucher for one lucky entry. informationliteracy.org.uk/2016/05/why-is... via @YouTube
Cognitive Presence

“The extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication.” (https://coi.athabascau.ca/)

Cognitive Presence & ID

- E-learning / SCORM packages
- Prevent failure. Provide an “out”
- Instant feedback
- Popups: Definition and contextual
- Critical Thinking Questions
- Peer review
- Technology
  - **The differentiator**
  - Questions to promote higher order thinking within discussion boards
  - Tutorial creation using development tools (Captivate, Storyline, Lectora, Camtasia)
  - Instructor created sites that hold content and data (Wordpress, Excel, CartoDB)
  - Evaluating popular social media feeds
Are her blog posts reviewed by experts in a scholarly field?

Not quite. There was no mention of scholarly experts reviewing any of her blogs posts. NASA's host's her blog, but it's still not peer reviewed.
Cognitive Presence
SCORM, Instant Feedback, No Failure

Anya is writing a paper about how the sport of Cricket is a product of colonialism.

Anya knows that many of her readers might not be familiar with her topic, so she’s going to use the BEAM scheme to help gather information.

Let’s get started. You’ll learn how Anya used the BEAM scheme to help her write the paper.

Background Exhibit Argument Method
### Cognitive Presence
**SCORM, Instant Feedback, No Failure**

Teachers pose questions that are designed to promote metacognition and deeper thinking.

### Learning Outcomes

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Question</th>
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</thead>
<tbody>
<tr>
<td><strong>Comprehension</strong></td>
<td>How would you put ____ into your own words?</td>
</tr>
<tr>
<td><strong>Application</strong></td>
<td>How could ____ be put into practice?</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td>What assumptions/biases underlie or are hidden within ____?</td>
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<tr>
<td><strong>Synthesis</strong></td>
<td>How can this idea be combined with _____ to create a more complete or comprehensive understanding of ____?</td>
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<tr>
<td><strong>Evaluation</strong></td>
<td>How would you judge the accuracy or validity of _______?</td>
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<tr>
<td><strong>Deduction</strong></td>
<td>What specific conclusions can be drawn from this general ____?</td>
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<tr>
<td><strong>Induction</strong></td>
<td>What are the broader implications of ____?</td>
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## Cognitive Presence
Promoting transfer of knowledge

### Gagne’s Conditions of Learning
- Gaining attention
- Informing learners of the objective
- Stimulating recall of prior learning
- Presenting the stimulus
- Providing learning guidance
- Eliciting performance
- Providing feedback
- Assessing performance
- Enhancing retention and transfer

### Mayer’s Multimedia Learning
- Coherence Principle
- Signaling Principle
- Redundancy Principle
- Spatial Contiguity Principle
- Temporal Contiguity Principle
- Segmenting Principle
- Modality Principle
- Multimedia Principle
- Personalization Principle
- Voice Principle
- Image Principle
“Teaching presence is defined as the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes.” (https://coi.athabascau.ca/)
Teaching Presence & ID

- Encourage communication
- Commenting and annotating peer reviews
- Frequent chats & discussions
- Teacher feedback: allow revisions on complex assignments. Initiate dialogue on assignments

Technology
- Video of instructor explaining assignments and contextual information
- LMS Announcements
- Class room mailing lists
- Webinar sessions
- Google Hangouts
- Skype
- hypothes.is – Annotation for the web
How do we create a Col in the online classroom?

<table>
<thead>
<tr>
<th></th>
<th>Social Presence</th>
<th>Teaching Presence</th>
<th>Cognitive Presence</th>
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</thead>
<tbody>
<tr>
<td>Setting clear expectations</td>
<td></td>
<td>x</td>
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<tr>
<td>Course announcements</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Introductions and social forums</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Lecture content</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Teacher-led discussions</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Student-led discussions</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Synchronous sessions (audio-video)</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Wikis (Collaborative)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Projects, Assignments &amp; Exams</td>
<td>x</td>
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<td>x</td>
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</tbody>
</table>
A Higher Summit

Results, Next Steps, Best Practices
How did it work out?

• Stats about improvement
  • Authority went from 56% to 75% as the average grade
    • One student didn't do tutorial: 40%
  • BEAM went from 80% to 75%
    • We need to assess trouble spots and revise tutorial accordingly
    • We may wait one more semester to add more data

• Challenges
  • Hard without instructor support
  • The most recent class was small and unmotivated

• Going forward
  • Add summary discussion boards
  • Creating all new tutorials for in-person IL instruction
Designing for Various Online Situations

- Use interactive tutorials in class or beforehand
- Use collaborative tools in an LMS or via Google for discussions and group resources
- Create tutorials that support teaching and cognitive presence by including branching assessment
- Rapid development tools
  - Easy to modify and create – User PPT’s as starting point
  - Built-in formative assessments
  - Example tools: Camtasia, Storyline, Captivate, Lectora
- Personalize tutorials in some way
Very little research about Community of Inquiry and Information Literacy


- Creative ways to implement CoI in libraries
- ISD Models: Revise, revise, revise.
- Seek feedback from others. Consider UX & UI
- Combining Frameworks – COI & Backwards Design