Leveraging Articulate Storyline and an LMS to go Beyond the One-Shot IL Session

Presented by
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Presentation Overview

• Background about the program.
• Describe the transition from one-shot to a new model.
• Explain challenges to the new model.
• Describe development of online tutorials.
• Exploring assessment in action.
• Lessons learned and take-away's.
About First Year English

- Taken by almost all first year students.
- Libraries' largest instruction client.
- First exposure to academic research and academic writing.
# Traditional Model

<table>
<thead>
<tr>
<th>In Class</th>
<th>After Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>One shot instruction</td>
</tr>
<tr>
<td></td>
<td>More material than time</td>
</tr>
<tr>
<td></td>
<td>Little chance to follow-up</td>
</tr>
<tr>
<td></td>
<td>Waiting for Godot</td>
</tr>
</tbody>
</table>
Re-Thinking the Model

- Created Librarian role in Brightspace (D2L).
- Assigned instructors, not sections.
- Develop online tutorials for flexible instruction and better assessment.
FYE Librarian Program

• "Train the trainer" model for new instructors

• Two-semester support

• Focus on instructor-librarian partnership

• Introduction of D2L integration
Tutorial Development

- Focus on “threshold concepts”.
- Incorporate multimedia learning theory.
  - Short, focused lessons.
  - Conversational instead of formal style.
  - Offer practice opportunities.
  - Utilize explanatory feedback.
  - Give control, but not a lot.
Launching the Tutorials

http://www.marquette.edu/library/lor/first-year-english/
## Fall 2015 Usage

### Section Usage

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Intro to Academic Research)</strong></td>
<td></td>
</tr>
<tr>
<td>Sections loaded in</td>
<td>77 out of 80</td>
</tr>
<tr>
<td>Sections that used module</td>
<td>33 out of 77</td>
</tr>
<tr>
<td>Usage rate of module</td>
<td>42.86%</td>
</tr>
</tbody>
</table>

### Student Participation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Intro to Academic Research)</strong></td>
<td></td>
</tr>
<tr>
<td>Total Students in a section with a module</td>
<td>550</td>
</tr>
<tr>
<td>Students completing module</td>
<td>383</td>
</tr>
<tr>
<td></td>
<td>(69.64% participation)</td>
</tr>
</tbody>
</table>
## Fall 2015 Usage – Other Tutorials

<table>
<thead>
<tr>
<th>Section Usage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Boolean</td>
<td>18</td>
</tr>
<tr>
<td>Narrowing a Topic</td>
<td>16</td>
</tr>
<tr>
<td>Evaluating Sources</td>
<td>16</td>
</tr>
<tr>
<td>Citation Drag and Drop</td>
<td>18</td>
</tr>
<tr>
<td>Party (source usage)</td>
<td>13</td>
</tr>
</tbody>
</table>
Get the Files and Contribute!

- Storyline files released under a GNU General Public License.
- Available for download from GitHub.
- Add your changed files to GitHub.

http://marquettermi.github.io/information-literacy-modules/
"Embedded Lite"

<table>
<thead>
<tr>
<th>Prior to Class</th>
<th>In Class</th>
<th>After Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assigned online tutorial</td>
<td>• Tailored instruction</td>
<td>• Continue discussion</td>
</tr>
<tr>
<td>• Foreshadow class lesson</td>
<td>• More time for higher level work/discussion</td>
<td>• Opportunities for additional tutorials and follow-up</td>
</tr>
<tr>
<td>• Review of student work</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### "In the trenches" Model

<table>
<thead>
<tr>
<th>Prior to Class</th>
<th>In Class</th>
<th>After Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Early in-class visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Assigned online tutorial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Review of student work</td>
<td>- Tailored instruction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- More time for higher level work/discussion</td>
<td>- Continue discussion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Opportunities for additional tutorial and follow-up</td>
</tr>
</tbody>
</table>
Faculty Feedback

• “I liked that [my librarian] was flexible to the student needs and had clearly been taking the time to monitor their individual progress on D2L.”

• "[My librarian] was really able to give them expert advice about all of the strange and frustrating questions that arise while doing research.”

• "In the future I think I would actually try to implement further integration so that my students would feel more comfortable seeking help outside of me for their research needs.”

• "The librarian came into class a second time just to help students as they searched for sources. This proved to be very helpful!"
Assessment: History

• 2012-2014:
  – Student surveys: evaluation and assessment questions

• 2015:
  – Learning management system (D2L) data analysis with IRB approval
## 2012-2014 Assessment overview

<table>
<thead>
<tr>
<th>Question (paraphrased)</th>
<th>'Correct' answer</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you get help in the library?</td>
<td>All of above ...</td>
<td>95.59</td>
<td>97.65</td>
<td>96.27</td>
</tr>
<tr>
<td>For malaria topic, choose the most effective article search strategy ...</td>
<td>mosquito and nets and malaria</td>
<td>n/a</td>
<td>66.91</td>
<td>68.25</td>
</tr>
<tr>
<td>What do you do when there’s no full-text?</td>
<td>Find It @ MU</td>
<td>89.03</td>
<td>91.68</td>
<td>92.29</td>
</tr>
<tr>
<td>Identify bold-font element in an article citation ...</td>
<td>Article title</td>
<td>72.16</td>
<td>75.77</td>
<td>83.80</td>
</tr>
<tr>
<td>What’s your confidence level after the workshop?</td>
<td>More confident</td>
<td>84.77</td>
<td>84.45</td>
<td>82.65</td>
</tr>
</tbody>
</table>
2015 Assessment: Methodology

- Consent from 177 students in 19 Freshman English sections.
- Harvested LMS data from Intro to Academic Research tutorial.
- 2 coders created a codebook for analyzing data.
- Used Qualtrics forms for SPSS compatible data.
Academic Library Research 101

In this tutorial, you’ll learn a little more about library research and how to search the database, Academic Search Complete.

You’ll also learn why you should be using one of these databases instead of a free tool like Google Scholar or Wikipedia.

Select one of the Post-it notes to the right to begin exploring library research.

To get credit for this assignment, you MUST complete Post-it note #4, Practice Using Academic Search Complete.
Database Searching Practice

This 4 step activity will get you started on the process of searching for articles for your paper. The academic search process may change your focus, maybe even your research question.

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STEP 1: Select an Idea to Research

Before you begin searching, you need a research idea. Type your initial idea as a question below.

Example: Is obesity increasing around the world?
STEP 2: The Search Statement

A search statement has 2 parts: keywords, and a search command.

1. Enter 2 keywords (or phrases) to start searching.
2. Pick the appropriate search command (Boolean operator).

The idea you picked is: is obesity spreading around the world

Your Search Statement:

- type first keyword here...
- Pick One
- type second keyword here...

Boolean recap:
- AND: Narrows a search.
- OR: Broadens a search.
- NOT: Excludes a term.
STEP 3: Search Skills In Action

Click here to open a new browser window.

- Start the research process with your search statement.
- Pick 1 article relevant to your research topic.
- Enter the title, journal title, and publication year below.

Search statement: obesity AND global

1.) type the article title here...

2.) type the source (magazine or journal) title here...

3.) type the year it was published here...
STEP 4: Research Reflection

Research is a process; the end point may not be what you expected. Briefly describe your database searching:

- What did you do after entering your initial search statement?
- What challenges did you have?
- What did you learn about the academic research process?

Type your reflection here...
Tutorial Data Collected

- Student topic, or research question
- Keywords chosen by student for topic
- Choice of Boolean command
- Article information:
  - Article title
  - Journal title
  - Publication year
- Reflection, responses to prompts
Subject Consistency Example

• **Search/topic sentence:**
  - "How common is Alzheimer's Disease in the world"

• **Keywords:**
  - Alzheimer's Disease AND common

• **Article title:**
  - "Active immunization against complement factor C5a: a new therapeutic approach for Alzheimer's disease"

• **Publication title:**
  - Journal entry
Subject Consistency Analysis

Rating Scale:
1. Not a serious answer
2. No real connection, but student seems on task
3. 2 or 3 out of 4 items are well connected
4. All 4 items (search topic, 2 search terms, article title and journal title) are well connected

Findings:
- 63.8% of responses were coded 3 or 4.
- Students were able to select keywords consistent with their topics.
- Students were able to find articles in publications consistent with their research topic.
Keyword Choice Analysis

Rating Scale:
1. Not on topic
2. Functional, but not so effective
3. Good choices

Findings:
• 62.1% of responses were coded 2 or 3.
• 27% of responses coded 3
• 9.6% of responses coded 1.

Rating 2 example:
– obesity AND world

Rating 3 example:
– women AND refugees
Boolean Choice Analysis

Rating Scale:

1. Poor choice, not clear they understood
2. Functional, technically, but not the best choice
3. Good choice

Findings:

• 89.8% of responses were coded 3.
• Rating 1 example:
  – nature OR rights
• Rating 2 example:
  – psychological disorders OR refugee health
Publication Title Analysis

Rating Scale:

1. Not a serious answer
2. Not a publication title
3. Not from database
4. Probably a newspaper, magazine, or trade title
5. Probably a scholarly title

Findings:

• 56.5% of respondents successfully completed this task.
• 48.6% of responses were coded 5.
• 20.9% of responses were coded 2.
• 7.9% of responses were coded 4.
Reflection prompts:

• What did you do after entering your initial search statement?
• What challenges did you have?
• What did you learn about the academic research process?
Codebook Themes

- Coder evaluation (subjective)
- Emotional expression
- Mention of past experience
- Comparison with Google, other web search
- Research process
- Response contents (descriptive)
- Database searching specifics
Results - Less Useful

- Coder evaluations
- Emotional expression:
  - 6 % of responses only
- Past experience:
  - 8 % of responses only
Results - Moderately Useful

• 16.4% of responses made a comparison between databases and Google, et al.
  – More credible, reliable, authoritative
  – Better than web searching
  – More efficient, save time
  – Harder to search
Results – More Useful

- Research process: 7 codes
- Content items in responses: 13 codes
- Database searching specifics: 23 codes
Research Process

• 29.4% addressed this theme
  – Revised, focused, **changed research question**
  – **Research takes time** if you want good sources
  – Need to spend time thinking about research question
  – Need **background information** on topic
  – Hard to formulate a research question
  – Separate research sources may be necessary for different aspects of research question
“I looked through the different options that came up and it was hard to pick which one was the correct article. However, the abstract in the beginning of the article helped and reading through different articles helped me figure out what perspective to take with my question and what to specifically look for.”

“My challenge was that I didn't really know exactly what I was looking for at first, but after a little browsing I knew what I wanted.”

“... not all the information one is looking for will come from one source.”

“I had to narrow my search a bit more and even after doing that it was still a bit tough to find articles. This makes me think that my topic might be too broad and that I will have to narrow it more.”
<table>
<thead>
<tr>
<th>Theme code:</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Search results:</strong> described qualitatively, or did something with them (e.g. too many/too few; relevant/not relevant; browsing through)</td>
<td>65.5</td>
</tr>
<tr>
<td><strong>Keywords</strong> (e.g. changing, choosing; synonyms, related; number of; examples of)</td>
<td>47.5</td>
</tr>
<tr>
<td><strong>Changes in search strategy</strong> (e.g. added keyword; refined/narrowed/broadened search)</td>
<td>35.6</td>
</tr>
<tr>
<td><strong>Internal thought process</strong> (e.g. “I wanted a broader subject”; “I realized …”, “I was hoping for …”)</td>
<td>25.4</td>
</tr>
<tr>
<td>“I had no challenges”</td>
<td>23.7</td>
</tr>
<tr>
<td><strong>Search syntax description</strong> (e.g. keywords &amp; commands)</td>
<td>22.0</td>
</tr>
<tr>
<td>Mentioned “being <strong>specific</strong>” as important or helpful</td>
<td>18.0</td>
</tr>
</tbody>
</table>
Database Specifics Theme: Summary Analysis

<table>
<thead>
<tr>
<th>Code sub-topics</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any code about <strong>keywords</strong> (e.g. changing, adding, examples of)</td>
<td>48.6</td>
</tr>
<tr>
<td>Any code about <strong>looking at results</strong> (results displays in aggregate)</td>
<td>40.7</td>
</tr>
<tr>
<td>Any code about <strong>article evaluation</strong></td>
<td>32.8</td>
</tr>
<tr>
<td>Any code about <strong>relevance</strong> (of results or articles)</td>
<td>30</td>
</tr>
<tr>
<td>Any code about <strong>database features</strong> (e.g. date or peer-review limits)</td>
<td>12</td>
</tr>
</tbody>
</table>
## Database Specifics Theme: Sub-Topics

<table>
<thead>
<tr>
<th>Sub-topic codes for keywords:</th>
<th># of codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>keywords: changed, revised, focused</td>
<td>75</td>
</tr>
<tr>
<td>keywords: it's important to choose good ones</td>
<td>17</td>
</tr>
<tr>
<td>keywords: it's hard to choose good keywords</td>
<td>15</td>
</tr>
<tr>
<td><strong>Any code about keywords</strong></td>
<td><strong>86</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-topic codes for relevance:</th>
<th># of codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;relevant to my topic/question&quot;</td>
<td>44</td>
</tr>
<tr>
<td>chose an article relevant to student topic/question</td>
<td>39</td>
</tr>
<tr>
<td>it's hard to determine relevance; &quot;1st/top article not always most relevant&quot;</td>
<td>33</td>
</tr>
<tr>
<td>results are relevant, very relevant</td>
<td>18</td>
</tr>
<tr>
<td>results are not very relevant</td>
<td>14</td>
</tr>
<tr>
<td>article is relevant to student's topic/question</td>
<td>29</td>
</tr>
<tr>
<td><strong>Any code about relevance</strong></td>
<td><strong>53</strong></td>
</tr>
</tbody>
</table>
Study Conclusions

- Open-ended prompt questions:
  - Two-thirds of students addressed the more concrete prompts, described what they did
  - Only 29% wrote on the research process
- 64% of students completed the tutorial in good faith
- 56% clearly recognize journal/magazine titles
- 21% have difficulty recognizing publication titles
- 90% chose the appropriate Boolean command
- Recurring themes in students’ writing: relevance, specificity in keywords and evaluation.
Study Limitations

• Data NOT collected:
  – How much time needed to complete it?
  – Was credit given?
  – When the student completed the tutorial (before or after IL session?)

• Codebook problems created inter-coder divergence.
Tutorial Limitations

• Data in LMS are simply ugly!
• Instructors are novices in using the LMS.
• Many instructors are new to teaching.
• Full adoption will need a lot more 'friend-raising'
  – Among instructors
  – Among librarians
Scalability Issues: Online and in the Classroom

• Embeddedness
  – Even "embedded lite" increases the workload of instruction librarians with many other responsibilities and courses to support.

• Assessment
  – That's a lot of coding...
What is next?

• Let's turn that codebook into a rubric!

• Heightened collaboration with the new FYE director.
  – Mandatory online modules and integrated assessment tools are on the horizon.
What questions do you have?

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Eric Kowalik (eric.kowalik@mu.edu)

http://marquetterml.github.io/information-literacy-modules/