So What is Expected?
Faculty at a Tier 1 Research Institute have high expectations of undergraduates in terms of information literacy, but many are not prepared to meet these in their first or second semesters.
- Synthesis of information
- Critical thinking and evaluation
- Deep reading and/or reading for relevance
- Independence and understanding the implicit
- Reflection
- Ability to use library resources

Challenges
Students face a multitude of barriers when it comes to the rigors of academic research required at universities.

Source Identification and Selection
- Why does your professor require different source types?
- How do you identify them?

Organization of Information
- How do you discover and access the sources you need?
- How do you read and make citations?
- Why does it matter?

Flexibility and Adaptability
- How do you break free of your preconceptions during research?
- How do you incorporate and synthesize information into their product?
- How do you balance effective, efficient research and iteration and just getting the job done?
- Why do we bother?

What We’re Doing
We teach an 8-week Information Literacy lab (iLab) embedded within an undergraduate Writing and Rhetoric Course.

We reach 65% of incoming freshmen or roughly 3000 students an academic year.
We use a pre-test and post-test model to assess student skill and knowledge attainment. [See Table 1]

<table>
<thead>
<tr>
<th>Semester</th>
<th>Pre</th>
<th>Post</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA 2017</td>
<td>76.78</td>
<td>85.82</td>
<td>9.04</td>
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<tr>
<td>SP 2018</td>
<td>76.83</td>
<td>86.06</td>
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<td>FA 2018</td>
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<td>SP 2019*</td>
<td>64.55</td>
<td>82.23</td>
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*Assessment Update

Course Overview

A. Sample of Learning Objectives Tied to the Challenges
- Students will explore information source types and determine their qualities and depth with 80% accuracy
- Students will identify the parts of an MLA 8th citation with 80% accuracy
- Students will compose appropriate search strategies in order to retrieve information with 80% accuracy
- Students will identify the parts of a resource relevant to their information need in order to skim effectively with 80% accuracy

B. Reinforcing via Intentional Iteration
- Research is not linear so why would our course be?
- Targeted weak areas: keyword and research question development
- Reflect on the process, what was learned and relevance to argument
- Iteration of research process in ENG105 research paper

C. First Year and Beyond
- Building a conceptual framework for the research process
- Utilizing library resources that are not course-specific
- Providing multimodal opportunities for IL in the future
- Acknowledging this is only the beginning!

Our Methods

A. Flipped Classroom
- Tutorial videos
- Quizzes
- Blackboard Course LMS

B. Active Learning Strategies
- Fish activity and depth of information [See Fig. 1-2]
- Brainstorming with mind maps

C. Social Constructivism
- Building knowledge with student interaction
- Group work and learning

D. Context
- Building a conceptual framework for the research process

What Everyone Can Do

A. Build Partnerships and Collaborate
- High schools and colleges
- College admissions

B. Outreach
- Area high schools
- Library media specialists, teachers, regional councils

C. Provide Expectations for Students
- Research demands
- A sample syllabus

D. Set Realistic Goals
- Budget constraints
- Expect small gains
- Scale