Helping College Students Climb Onto the Lifelong Learning Scaffold and Grapple with Real Life Skills

Debbie Morrow, Grand Valley State University
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A series of very fortunate events!

Debbie Morrow, MLIS
Grand Valley State University
MLA Annual Conference
Thursday, 27 October 2011, 1:30pm
The Context: Fall 2009

- GVSU School of Engineering ABET re-accreditation looms ...
  - Self-study due June 2010
  - visit scheduled for Sept. 2010

- GVSU Libraries staff changes and Liaison reassignments ...
  - Debbie Morrow becomes new Liaison Librarian for Engineering as of July 2009
• **Criteria for Accrediting Engineering Programs**
  – **Criterion 3. Program Outcomes**
    • (i) a recognition of the need for, and an ability to engage in life-long learning

Perennial challenge: defining “life-long learning” and getting it into the curriculum

http://www.abet.org/forms.shtml
GVSU School of Engineering

- ABET program criteria have been mapped throughout the BSE curriculum, in a scaffolded fashion
  - EGR 220, Measurement & Data Analysis
    - ABET 3(b) – design & conduct experiments, analyze and interpret data
    - ABET 3(f) – professional and ethical responsibilities
    - ABET 3(g) – communicate effectively
    - ABET 3(i) – lifelong learning
SoE Lifelong Learning Assessment Rubric – 1st year outcomes

- ability to effectively conduct internet or library searches;
- ability to find, evaluate and use information independently; and,
- ability to apply course concepts in an independent manner.

<table>
<thead>
<tr>
<th>Outcome element</th>
<th>Below Performance Expectations</th>
<th>Progressing to Performance Criteria</th>
<th>Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet or library searches</td>
<td>Demonstrates no ability to search the Internet or library resources and distinguish quality resources</td>
<td>Demonstrates limited ability to search the Internet or library resources and distinguish quality resources</td>
<td>Denies access to library resources</td>
</tr>
<tr>
<td>Ability to find, evaluate, and use information independently</td>
<td>Students demonstrate no ability to find or utilize information independently.</td>
<td>Students seek information from outside sources when necessary, but use few sources and primarily non-technical sources.</td>
<td>Students seek information from multiple sources, including technical reports and papers.</td>
</tr>
<tr>
<td>Ability to apply course concepts in an independent manner</td>
<td>Cannot connect course content to project in a meaningful way.</td>
<td>Makes some connection of course content to project, but makes errors in application of concepts.</td>
<td>Connects course content to project, and makes appropriate applications with meaningful outcomes.</td>
</tr>
</tbody>
</table>

AVERAGE SCORE:
Meanwhile, in the University Libraries . . .
ACRL

• “Information Literacy Competency Standards for Higher Education” (Jan. 2000)
  
  – Information Literacy Defined
  
  • a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm
“Information Literacy Core Competencies”

- What is information literacy?
  - a set of skills which includes finding information effectively; managing the abundance of information available; thinking critically about resources; synthesizing and incorporating information into one’s knowledge base; creatively expressing and effectively communicating new knowledge; using information ethically; and using knowledge to better society.

Competencies are “scaffolded” for increasing sophistication as students progress in their majors and disciplines.

A Chance Conversation Occurred

“SoE Curriculum Coordinator”

“University Libraries EGR Liaison Librarian”

... And a collaboration was born:
Collaboration – Winter 2010

• Library Skills Workshop introduced into EGR 220
  – 1 hour of EGR 220 lab time
  – Coordinated with introduction of the Final Project assignment:

• Final Project (ABET criteria)
  – Individual student projects
  – Intentional focus on independent experiment design and supporting background research (b,i)
  – Required to incorporate measurements and data analysis concepts (b)
  – Presented orally and documented appropriately (f,g,i)
Collaboration – Winter 2010

• Library Skills Workshop

  – Instruction primarily targeting 3 ILCCs:
    • III. Evaluate Sources / Know the difference between scholarly and other types of resources.
    • V. Use Information Ethically / Cite sources appropriately.
    • VI. Develop Subject Knowledge / Be aware of subject-specific resources (e.g., subject guides, subject specific databases, liaison librarians, etc.).

Note: The wording on the document on the web today is slightly different, as the ILCCs were initially accepted as a living document that is periodically revised.
Introduction

- It's important to know what type of ammunition to bring.
- Ammunition should be tested for performance.

What Was Used for Testing?

- Two Broadheads were chosen for testing
  - Arrow A
  - Arrow B

References

IL-related Observations

- Doing and including background research
  - *needs work*
- Referencing sources
  - *some improvement seen*
- Reference formatting
  - *needs work*
- Including image credits
  - *substantial improvement seen*

Three semesters in...
I still keep revising my instruction plan!
Next Steps

• Incorporate more active learning in EGR 220 workshop
• Discontinue pre-/post-tests, or seriously revise
• Librarian plans to do citation analysis instead of observing presentations live
• Tailor entire ILCC document for Engineering
• Examine ABET 3(i) as scaffolded through the rest of the BSE curriculum, and work toward strategic collaborations between SoE and the Library at upper levels
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Grand Valley State University  

*Helping College Students Climb Onto the Lifelong Learning Scaffold and Grapple with Real Life Skills*

College students today must “learn how to learn” – the content of their college courses will only scratch the surface of what they’ll need to know in the years following graduation, and the ocean of information is wide and deep. Teaching of information literacy skills is ideally closely tied to disciplinary and professional standards, curricular goals, course objectives, and assignment requirements. And ideally librarians can be partners with disciplinary faculty in strategically introducing IL skills into key courses and assignments at selected points in a curriculum. This session will explore a particularly fortuitous convergence of needs and opportunities leading to a faculty/librarian collaboration designed to help first-year Engineering students onto the first rungs of the lifelong learning ladder.