

Grand Valley State University

From the Selected Works of Debbie Morrow

June, 2011

Addressing ABET Program Outcome 'i': 
First-Year Engineering Program and Library
Instruction Initiative Collaboration

Debbie Morrow, *Grand Valley State University*



Available at: https://works.bepress.com/debbie_morrow/2/

Addressing ABET Program Outcome 'i':
A First-Year Engineering Program and
Library Instruction Initiative
Collaboration

A series of very
fortunate
events!

Debbie Morrow, MLIS
Grand Valley State University (Mich.)
ASEE ELD 'Lightning Talk'
Monday, 27 June 2011, 12:30pm

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

ABET

- *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.

EGR 220 – Engineering Measurement & Data Analysis Winter 2011

Student Name: _____

Performance Indicators for Outcome (i)

Outcome (i): The student demonstrates a recognition of the need for, and ability to engage in, life-long learning.

Operational definition: The student demonstrates that he/she:

- has the ability to independently find, evaluate, and use information to effectively complete an assignment.

Outcome element	1 Below Performance Expectations	2 Progressing to Performance Criteria	3 Meets Performance Criteria	4 Exceeds Performance Criteria	Score
Internet or library searches	Demonstrates no ability to search the Internet or library resources and distinguish quality resources	Demonstrates limited ability to search the Internet or library resources and distinguish quality resources	Demonstrates an ability to search the Internet or library resources and distinguish quality resources	Demonstrates extensive ability to search the Internet or library resources and distinguish quality resources	
Ability to find, evaluate, and use information independently	Students demonstrate no ability to find or utilize information independently.	Students seek information from outside sources when necessary, but use few sources and primarily non-technical sources.	Students seek information from multiple sources, including technical reports and papers.	Students seek information from a variety of sources and show discernment in the use of information.	
Ability to apply course concepts in an independent manner	Cannot connect course content to project in a meaningful way	Makes some connection of course content to project, but makes errors in application of concepts	Connects course content to project but makes minimal or superficial meaning of the applied concepts	Connects course content to project, and makes appropriate applications with meaningful outcomes	
AVERAGE SCORE:					

A green chalkboard with a silver frame. In the center, there is a light green speech bubble with a tail pointing towards the bottom left. Inside the speech bubble, the text "Meanwhile, in the University Libraries . . ." is written in white. At the bottom left of the chalkboard, there is a small black rectangular object with two white rectangular pieces on top, resembling a stack of papers or a small podium.

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>

GVSU Libraries

- “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.

<http://www.gvsu.edu/library/information-literacy-core-competencies-168.htm>

“ILCCs”

Information Literacy Core Competencies

Skills Goals	Objectives
<p>I. Construct a question or problem statement Able to articulate need for existing information and literature and develop a research question or thesis statement.</p>	<p><i>General Education and Basic Skills Courses:</i></p> <ul style="list-style-type: none">• Define the topic and the information needed• Develop and refine a proto-thesis or preliminary opinion on the topic• Seek information beyond course materials as necessary• Develop a manageable focus appropriate to criteria of assignment <p><i>Major Program:</i></p> <ul style="list-style-type: none">• Actively and independently seek sources beyond course materials• Articulate research question or thesis statement within confines/context of discipline• Use discipline-specific terminology <p><i>Graduate Programs:</i></p> <ul style="list-style-type: none">• Develop an original research question which contributes to the body of knowledge in the field

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
 - 1 hour of EGR 220 lab time
 - Coordinated with introduction of the Final Project assignment
 - 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.).*

IL-related Observations

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



Three semesters in...
I still need work!



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 ILCCs 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

Debbie Morrow (morrowd@gvsu.edu)

Grand Valley State University

Addressing ABET Program Outcome 'i': A First-Year Engineering Program and Library Instruction Initiative Collaboration

Grand Valley's School of Engineering recently invited the University Libraries to collaborate in an effort to address ABET outcome 'i', engaging in lifelong learning, in one of their first year core courses. The Libraries have recently developed an "Information Literacy Core Competencies" document, evolving out of the ACRL IL competencies standard adopted in 2000. Our collaboration has so far been a great exercise in exploring the effective intersection of ABET 'i' and information literacy competencies, in the context of incorporation into an existing course in GVSU's first-year engineering curriculum.