Developing and implementing course embedded assessments for General Education

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All of the University of Michigan-Flint
TAKE AWAY POINTS

• **NOT** the product, but the process

• Developing a **DEEPER** understanding of “embedded” assessment
Overview

- Institutional Background
- Turning GELO into Gold
- Constructing Rubrics
- Embedding Assessment
- Questions/Discussion
Institutional Background

• In the Fall of 2010, the University of Michigan-Flint
  – enrolled 6,874 undergraduates and 1,264 graduate students
  – offered 121 degree programs: 70 undergraduate degrees and 51 graduate programs
  – “enhanced” a distributive General Education program dating back to the 1970s
Institutional Background

• In addition to adding 4 new distributional areas
• UM-Flint also approved 12 learning outcomes that are linked to the distributional areas through courses

1. Reflection on Learning
2. Research Methods
3. Critical Thinking
4. Creative Thinking
5. Competent Written Work
6. Dialogue Involving Respectful and Careful Listening
7. Use Visual/Non-Verbal tools
8. Knowledge of H, S, F, NL
9. Knowledge of FQ, HW, GS, T
10. Use Multiple Perspectives
11. Investigate the Nature of Citizenship
12. Apply Knowledge
Institutional Background

• General Education Outcomes Assessment before Fall 2010
  – $  
  – Time  
  – low participation
• By embedding the assessment in the courses
  – Better data  
  – Closer to what faculty are already doing  
  – Provide clear expectations
Institutional Background

• Transition by embedding Learning Outcomes within the courses used to fulfill the Distribution requirements.
• Each GE course would contribute to 5 General Education Learning Outcomes.
Institutional Background

REQUEST FOR GENERAL EDUCATION DISTRIBUTION DESIGNATION

Directions: Please indicate which learning outcomes will be addressed in this course (place the corresponding number and outcome where indicated). A minimum of five learning outcomes must be addressed for a course to be eligible for general education distribution designation. Please provide a brief narrative as to how the course objectives/key concepts address each learning outcome selected, and indicate what tools for assessment will be used.

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Department:</th>
<th>Course Prefix:</th>
<th>Course Number:</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

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<thead>
<tr>
<th>No.</th>
<th>Narrative:</th>
<th>Assessment tools:</th>
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</tr>
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Course Title: Department: Course Prefix: Course Number:
Institutional Background

• These “tickets” to the General Education Curriculum would become known on campus as the GELO forms.
• While initially conceived as a means to review and approve courses,
• The process and these forms proved to have a more important purpose
Turning GELO into Gold

• Backward Design
• Guiding Principles: Part 1
• Turning GELO into Gold – Harvesting Faculty Narratives on Student Learning and Assessment
• Guiding Principles: Part 2
Backward Design:
Some decisions were already made

- 12 outcomes
- Assessment to be done at the course level
- Faculty to assess all students in any GE designated course fulfilling a given outcome in a given semester
- University-wide rubrics
General Education Rubric for the Assessment of ITEM IN ALL CAPS

NAME OUTCOME definition of outcome based on line items

<table>
<thead>
<tr>
<th>LINE ITEM</th>
<th>define</th>
<th>Box text</th>
</tr>
</thead>
</table>

Rubric had to work:
- Across a scale of 0-5
- Across a student’s entire career
- Across courses at all levels
- Across disciplines in all four schools and college

Overall, has this student [describe outcome] for a course at this level in this discipline?  Yes  No
Guiding Principles: PART 1

• MIND THE LARGER STRUCTURE
• KEEP IT SIMPLE
• GET BEYOND THE GROUP
• USE THE RESOURCES WE HAVE
GELO FORMS

Reading the GELOs meant hearing from every faculty member across campus teaching a given outcome.

We mined the GELO forms for the “center of gravity”.
GELO FORMS: excerpts specific to outcome #2 Research Methods

• ARH 140

**Narrative:** The course goals include students understanding and utilizing a range of research sources in arts and humanities texts, web-based resources, lectures, and field trips. In a final research paper, students will identify different origins for their research topics selected from two or more time periods, cultures, or genre/movements. As part of the composite grade, they will be required to identify and demonstrate which periods were most relevant and interesting and submit a rationale and original source for their topic selection.

**Assessment tools:** A research methodology paragraph included in the final (research) paper first draft.

• PHS 421

**Narrative:** Students compare assumptions and perspectives from multiple disciplines. Students are required to take a peer reviewed article from a professional journal and critically evaluate/analyze the research and resources cited in the article. Students follow a standard scientific method of writing and organize their paper in the format of the New England Journal of Medicine or the American Journal of Public Health with appropriate subsections. Students also complete a site assessment related to indoor air pollution and an ergonomic review of a work station using standard analysis tools that they then evaluate.

**Assessment tools:** Students complete a professional journal article review and site assessment.
## GELO CONTENT ANALYSIS

<table>
<thead>
<tr>
<th>Key Terms Used to Describe “Facility with Research Methods”</th>
<th>Number of Forms Out of 117 Using This Key Term</th>
<th>Academic Areas Using This Key Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analyze Sources/Interpret Data</strong> (determining usefulness, credibility, validity, appropriateness, showing understanding of argument, compare/contrast, observe and conclude and/or differentiate)</td>
<td>56</td>
<td>AFA, ANT, BIO, BUS, CSC, CIS, CHM, EDE, EGR, ENG, GEO, HCR, HIS, MTH, MUS, NUR, PHY, PHS, PSY, SCI, SOC, SWR, UNV</td>
</tr>
<tr>
<td><strong>Find and Use Secondary Texts/Journal Articles/Books/Scholarly Articles/Disciplinary Literature</strong></td>
<td>43</td>
<td>AFA, ANT, CHM, CIS, CSC, DAN, EDE, EGR, EHS, ENG, HCR, HIS, MUS, NUR, PHS, PSY, SOC, SPN, THE, UNV</td>
</tr>
</tbody>
</table>
Toward Career-Long Assessment Rubrics

- GELO Analyses
- Outcome Strategy Group Drafts
- General Education forums and open sessions
- Previous General Education rubrics
- First Year Experience pilot rubrics
- VALUE rubrics
- Department specific rubrics
Guiding Principles: PART 2

• MIND THE LARGER STRUCTURE
• KEEP IT SIMPLE
• GET BEYOND THE GROUP
• USE THE RESOURCES WE HAVE

• DON’T TRY TO INCLUDE EVERYTHING

• STAY WITHIN THE LINES

• AVOID THE PITALLS OF INCREMENTAL ADJECTIVES
<table>
<thead>
<tr>
<th>MASTERY 5</th>
<th>DEVELOPING 4</th>
<th>DEVELOPING 3</th>
<th>EMERGING 2</th>
<th>EMERGING 1</th>
<th>0</th>
<th>N/A</th>
</tr>
</thead>
</table>
| **2. ANALYSIS OF DATA or PRIMARY SOURCE MATERIALS**  
*Skillfully analyzes, interprets, and/or evaluates relevant features of the object of study to draw meaningful and logical conclusions. Shows complex, creative, and innovative thought.* | Skillfully locates and analyzes relevant aspects of the object of study and uses them to draw logical conclusions. Shows insight. | Locates relevant aspects of the object of study and begins to make analytical moves on them. Analysis is not fully developed, but moves logically from the object of study to conclusions. | Describes valid object of study and identifies its key features, but does not analyze those features. Draws general conclusions. | Lists or describes object of study. Does not identify its key features or analyze them. Conclusions may be ambiguous, illogical, or unsupported. | Object of study is invalid, and not described, interpreted, or analyzed. | |
| **3. ENGAGEMENT WITH EXISTING RESEARCH**  
*Locates and productively engages with existing research in the field* | Critically engages with the most relevant scholarly sources located by using the discipline’s best search strategies. Ethically represents proprietary material correctly using disciplinary citation style. | Engages with relevant academic research responsibly if not comprehensively. Ethically represents proprietary material using a disciplinary citation style. | Organizes/synthesizes information from acceptable sources and begins to engage with it. Uses limited range of search tools. Ethically represents most proprietary material using a disciplinary citation style. | Inserts information from indiscriminately selected sources but does not engage with it. Attempts to document sources. | Irresponsibly inserts information from poorly chosen and randomly accessed sources. Attempts to document sources. | Plagiarizes existing research. |
Embedding Assessment within Courses

• Allows faculty to:
  
  Use one piece of work (to assess GE outcomes and course evaluations)
  
  Assess manifestations of student learning at nearly the same time (need not go back)

• The rub was to develop a faculty friendly method to enter such data.
Embedding Assessment within Courses

• While embedded, the assessment of GE outcomes does represent EXTRA work
• Therefore, the processing of recording the assessment results needs to be as easy as possible
• Provide extensive documentation every semester
• Host multiple drop-in workshops and training every semester
Embedding Assessment within Courses
Embedding Assessment within Courses
Embedding Assessment within Courses

### University of Michigan-Flint Rubric for the Embedded Assessment of RESEARCH METHODS

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Mastery</th>
<th>Developing Developing</th>
<th>Developing</th>
<th>Emerging</th>
<th>Emerging</th>
<th>Zero</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. METHODOLOGY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shows sophisicated execution of the field's research models and theoretical approaches.</td>
<td>○ 5</td>
<td>○ 4</td>
<td>○ 3</td>
<td>○ 2</td>
<td>○ 1</td>
<td>Zero</td>
<td>○ 0</td>
</tr>
<tr>
<td>2. ANALYSIS OF DATA or PRIMARY SOURCE MATERIALS</td>
<td>Skilfully analyzes, interprets, and evaluates the object of study.</td>
<td>○ 5</td>
<td>○ 4</td>
<td>○ 3</td>
<td>○ 2</td>
<td>○ 1</td>
<td>Zero</td>
</tr>
<tr>
<td>3. ENGAGEMENT WITH EXISTING RESEARCH</td>
<td>Critically engages with the object of study.</td>
<td>○ 5</td>
<td>○ 4</td>
<td>○ 3</td>
<td>○ 2</td>
<td>○ 1</td>
<td>Zero</td>
</tr>
</tbody>
</table>

The rubric assesses competencies related to research methodology, data analysis, and engagement with existing research. Each criterion is rated on a scale from Mastery to Mastery to Emerging to Zero, with specific behaviors described for each level.
Embedding Assessment within Courses

- This allowed us to have faculty use the rubrics in a way that efficiently collected data.

**Competent Writing: Structure by Level**

<table>
<thead>
<tr>
<th>Level</th>
<th>Not Present</th>
<th>Emerging 1</th>
<th>Emerging 2</th>
<th>Developing 3</th>
<th>Developing 4</th>
<th>Mastery 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 level, N=5534</td>
<td>10.0</td>
<td>5.0</td>
<td>15.0</td>
<td>30.0</td>
<td>40.0</td>
<td>5.0</td>
</tr>
<tr>
<td>200 level, N=1828</td>
<td>0.0</td>
<td>0.0</td>
<td>5.0</td>
<td>20.0</td>
<td>30.0</td>
<td>10.0</td>
</tr>
<tr>
<td>300 level, N=1925</td>
<td>0.0</td>
<td>10.0</td>
<td>20.0</td>
<td>30.0</td>
<td>25.0</td>
<td>10.0</td>
</tr>
<tr>
<td>400 level, N=433</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Embedding Assessment within Courses

Integrate

• Registration Data,
• Information on the courses’ General Education Outcomes, and
• Assessment Data Collection
Embedding Assessment within Courses

• MORE IMPORTANTLY than the data
  – prompted conversations about student learning
  – Promoted student learning
  – Shifted the conversation about writing

• This process worked because
  – The assessment reflects what faculty are already doing
  – The process appreciates faculty workload
  – The rubric reflects our faculty members’ voices when they talk about the learning outcome
TAKE AWAY POINTS

• **NOT** the rubrics, but the process by which we developed the rubrics

• From embedding outcomes in courses to embedding assessments,

  – we have been able to more closely align learning and assessment
Questions/Discussion (5:20-5:30)

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