Critical Reflection: What’s the Big Deal?

Nov. 8th, 2017

Sarah Woodley, PhD
Outline

Community-engaged learning, defined

Key elements of CEL

Rigorous Learning
  ◦ Civic Learning

Critical Reflection to generate, deepen, and document learning
  ◦ When, What, How

Woodley Example

Acknowledgements/Sources
Community Engaged Learning, defined

Critical Thinking | Social Ethics

Community-based problem solving

Public Deliberation | New Knowledge & Higher Order Learning
Collective Action
Key Elements of CEL

Engaging with a Civic Issue/Public Problem:
injustice, disparity, violated human right

Examples?
Science Literacy
Others?
Key Elements of CEL

Engaging with a Civic Issue/Public Problem: injustice, disparity, violated human right

- Community Partner
- Rigorous Learning
- Assessment
- Critical Reflection
Rigorous learning (FCEL)

Students will be able to:

• Define the **civic issue(s) or public problem(s)** that are being discussed in the class.

• Describe how the **disciplinary-specific** knowledge or skills of the class are relevant to addressing the civic issue/public problem.

*Plus at least 2 of the following:*

• Describe ways in which **civic values and civic empathy** influence possible approaches to public problem solving.

• Describe why working with **diverse stakeholders and across-cultural approaches**, ways of knowing, or kinds of expertise are central to addressing civic issues/public problem.

• Examine their **willingness to contribute** to a more just world.

• Define and describe “community”, “public sector”, or “methods of social change” as they related to the civic issue/public problem.
Civic Learning, examples

FROM FCEL DESIGNATION LEARNING PACKET

Civic Values
- Intellectual humility
- Openness
- Orientation towards justice
- Respect for human dignity

Civic Empathy
- Capacity to imagine oneself in the place of others who face different circumstances

ADDITIONAL (IUPUI)

Civic Mindedness, including...
- Reciprocal relationships with community partners
- Benefit of education to address social issues
- Working with others of difference
- Understand how social issues are addressed in society (methods of social change)
- Active participant to address social issues
- Global perspective/competency
- Etc...
Reflection: What is the big DEAL?
Reflection

NON-CRITICAL

- Touchy-feely
- Non-gradable
- Stream of consciousness
- Private
- Unstructured
- Very non-scientific

CRITICAL

- Generates, deepens, and documents learning
- Analytical
- Integrative
- Subject to public critique
- Structured/guided
Critical Reflection enables students to...

- *make meaning* of their experiences in light of course learning objectives

- concretize their growing *awareness* of public problems and their *capacity* to be involved in the redress of injustice.
<table>
<thead>
<tr>
<th>When</th>
<th>On-going: before, during, after</th>
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<tbody>
<tr>
<td></td>
<td>Formative (exploratory)</td>
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<tr>
<td></td>
<td>Summative (finalized)</td>
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<tr>
<td>What</td>
<td>Simple/Complex</td>
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<td></td>
<td>Groups/Alone</td>
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<tr>
<td></td>
<td>Quick/Lengthy</td>
</tr>
<tr>
<td>How</td>
<td>Experiential/Kolb’s</td>
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<td>ORID</td>
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<tr>
<td></td>
<td>DEAL</td>
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WHAT: Critical Reflection Toolkit

Group Discussion
# HOW: Guided/Structured

## Kolb’s/Experiential

<table>
<thead>
<tr>
<th>What?</th>
<th>So What?</th>
<th>Now What?</th>
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</thead>
</table>

## ORID

### Objective:
- What happened, Who was there?

### Reflective:
- How did they feel?

### Interpretive:
- What did they learn? How did their thinking change?

### Decisional:
- How will this impact their future?

## DEAL

- **Describe**
- **Examine**
- **Articulate Learning**

  - academic enhancement
  - civic learning
  - personal growth
DEAL model of Critical Reflection

Patti H. Clayton@ PHC Ventures
Woodley: CEL in a Physiology Laboratory Course

- 4 credits
- 16-20 junior biology majors
- 7 hrs/week

Community Engagement
- COL: K-8 youth

Learning
- Univ. students
- Water Quality

Novel Research
- Science Literacy

http://abslnews.weebly.com/dr-sarah-woodley.html
FUSION

Science Literacy
Science literacy, access to STEM opportunities

- Readings on outreach by scientists, civic mission
- Test scores in PPS

- Visit to Community Partner
- Developing science activities

- Share science activities with kids
  Interact with staff

Looking at
Listening to
Interacting with
Critical Reflection: On-going

- Pre-reflection
- Visceral Unpacking
- 3 pg written reflection (formative)
- Group reflection (formative)
- 10 pg written reflection (summative)
Critical Reflection Written Assignment

Describe
Examine
Articulate Learning
Describe

1. Describe the civic issue at hand and why it is important both locally and in general.

2. Describe the context and mechanics of the community-engaged experience related to the civic issue
   − What, Where, When, Who
   − Consider all the stakeholders. Make sure you include scientists like yourself!
   − Briefly describe the mechanics.
   − What did you do? What did others do?
Examine

For each category of learning (academic enhancement, civic learning, personal growth), explain what you learned, using the following prompts.

“I learned that…”
◦ Express an important learning outcome.

“I learned this when…”
◦ Connect the learning to specific activities that gave rise to it.

“This learning matters because…”
◦ Why does this matter to you (personally or professionally) and to the other stakeholders?

“In light of this learning I will…”
◦ Explain if you will change your future behaviors, and the associated benefits and challenges.
Articulate Learning in each category

<table>
<thead>
<tr>
<th>Academic enhancement</th>
<th>Civic Learning</th>
<th>Personal Growth</th>
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<tbody>
<tr>
<td>How did your preparation and your specific experiences at FUSION increase your understanding of scientific concepts and skills like communication and critical thinking?</td>
<td>Did the experience push you out of your homogenous cocoon? Explain.</td>
<td>What assumptions/expectations did you bring to the experience? Were your assumptions correct?</td>
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<td>Was the experience at Fusion one-way or bi-directional?</td>
<td>How did this experience make you feel about your role as a scientist? about your role as a member of society? about your abilities to work with diverse people?</td>
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<td>With this experience, have your views about the role of scientists, yourself included, in engaging with the lay-public changed?</td>
<td>In what ways did you succeed or fail in the situation?</td>
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<td>In what ways did the diversity (broadly defined) found among your fellow BIO students and FUSION students contribute to or challenge your learning?</td>
<td>What attributes/values did you demonstrate that contributed to the quality of the experience?</td>
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Assessment

Rubric to assign grade- See handout

Qualitative Data Analysis to identify common learning themes
Personal Growth

- Felt Discomfort
- Increased Self-Confidence
- Experience was Rewarding
- Connected to Own Life Experiences
- Gratitude for Own Privileges

![Bar Chart]

- Percent of Students
- 2015 (n=16)
- 2016 (n=19)
Civic Learning

Recognized Reciprocity
Awareness of Civic Issues
Importance of Scientists and Outreach
Increased Desire to Give Back
Recognized Incorrect Assumptions
Diversity Issues
Multi-cultural Sensitivity

Percent of Students

2015 (n=16)
2016 (n=19)
Critical Reflection is a big DEAL!
Thank you!

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Dr. Chris Fonner, course teaching assistant

Dr. Peter Freeman

Tiffany Ricketts

Bayer School of Natural and Environmental Sciences, DU

Department of Biological Sciences, DU

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The ABSL Team, in particular Dr. Nancy Trun
Sources

IPFW:  https://www.ipfw.edu/offices/sl/student_resources/reflection.html


Kolb, David. Experiential Learning Cycle chart.

Mary McMyne (Ed). Nd. *Faculty Partner Handbook*. Center for Community Engagement, Learning, and Leadership (CCELL) Louisiana State University.

Patti H Clayton: https://curricularengagement.com/