Keeping the Feedback Loop Active: Critical Incidents for Learning

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ENVR 200 Environmental Science I

(An introduction to the major global, regional, and local environmental issues facing human societies)

Course level learning goals:

Research skills:
- Find relevant information regarding environmental science topics
- Identify and evaluate the sources of environmental information, and their potential biases
- Formulate and ask relevant questions
- Synthesize environmental information from a variety of sources and viewpoints
- Understand and differentiate among the range of media types (newspaper, radio, TV, position papers, research papers.)

Communication skills:
- Communicate a coherent synthesis, both orally and in writing
- Defend a position (not necessarily your own) on an environmental issue

Group Work skills:
- Effectively contribute to group projects as a group leader
- Effectively contribute to group projects not as a group leader
- Evaluate the results of a group's work, as a member of the group
- Evaluate the contributions of peers to group work
- Evaluate the work of other groups, from an external perspective
- Evaluate the work of other individuals

Two (of 6) principles of education from David Orr

The goal of education is not mastery of subject matter, but of one's person.

The way learning occurs is as important as the content of particular courses.

1. Do you think these principles are important for your students' education?
2. What do you think you do in your courses to promote these principles?
3. How have you gathered and used (or imagined gathering/using) information about whether your efforts are working?

Types of activities in ENVR 200

Group poster sessions with peer review of posters

Simulated Town Hall meetings

Writing mock newspaper articles about Town Hall meetings

Individual research papers with peer review of drafts

Individual research presentations with peer review

Specific pre-class preparation for each meeting: questions
   for guest speakers, short research assignments…

NO FINAL EXAM!

A typical week in ENVR 200

September 23: **Climate Change Poster Session**

Readings:

Your journal article of choice from the peer-reviewed literature, for those presenting posters.

Assignments due:

Your poster (see separate instructions for details)

Evaluations of other posters (to be completed during class).

Research Project: Turn in working title (topic) and results of database searches. See Course Outline and VISTA for details.

September 25: **Science and Politics of Global Climate Change.**

Guest Speaker: *Phil Austin. Earth and Ocean Sciences, UBC*

Readings:

Cunningham et al (2005), Chapters 7 & 8.

Assignments due:

Class preparation notes:

- People: Who is Phil Austin?
- Write out 3 or more questions you might want to ask the speaker, at least one of which follows from your general textbook reading (mark which ones on your assignment). Think about whether there's anything in the textbook reading that you'd like an expert to clarify, or something that is contradicted by the additional reading supplied by the expert.
- Write a 1-2 paragraph answer to Critical Thinking Question 3 from Chapter 8 (Cunningham et al (2005) p. 170)

What are Critical Incidents?

"…vivid happenings that for some reason people remember as being significant" (Brookfield, 1995)

How does one identify them?
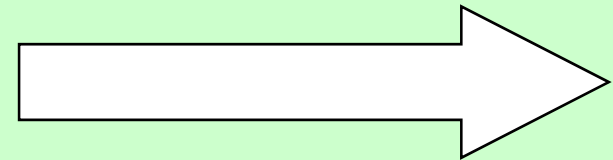
The Critical Incident Questionnaire

(from Stephen Brookfield, *Becoming a Critically Reflective Teacher.* **Jossey-Bass, 1995**

1. At what moment in class this week did you feel **most engaged** with what was happening?

2. At what moment in class this week did you feel **most distanced** from what was happening?

3. What action that anyone (teacher, student, speaker etc.) took in class this week did you find **most affirming or helpful**?

4. What action that anyone (teacher, student, speaker etc.) took in class this week did you find **most puzzling or confusing**?

5. What about the class this week **surprised you the most**? (This could be something about your own reactions to what went on, or something that someone did, or anything else that occurs to you).
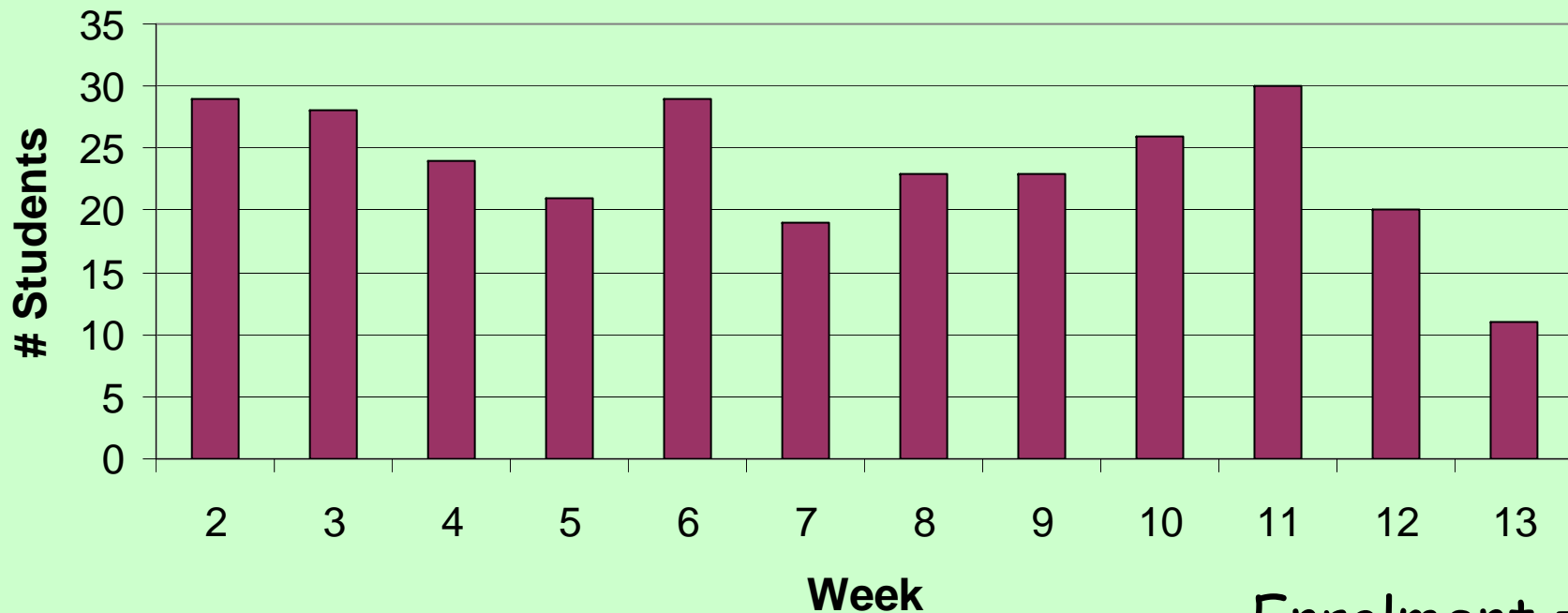
Logistics

Anonymous, electronic (VISTA) survey each Thursday (open from 2pm Th – 11 pm Fri).
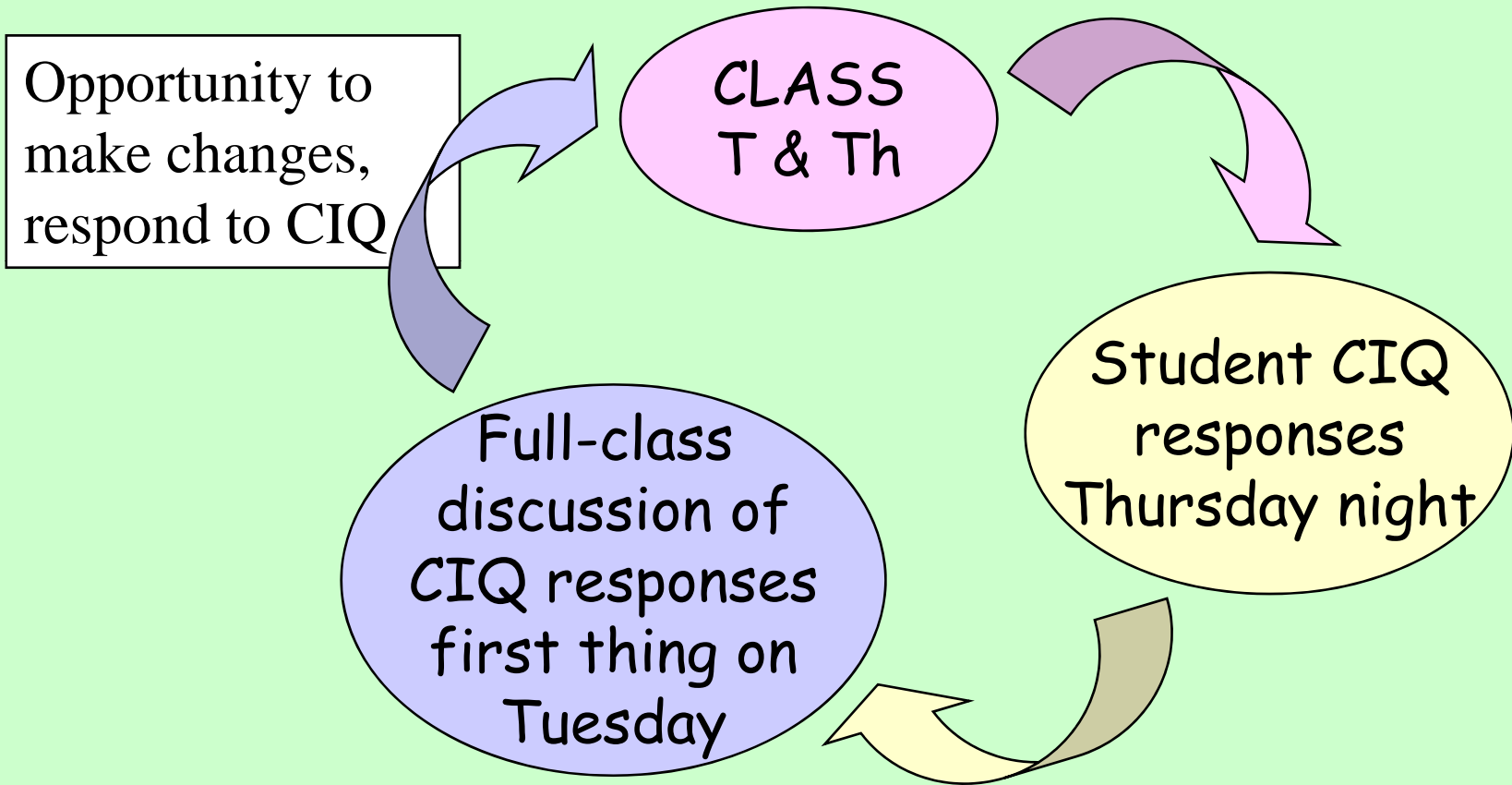
Same questions each week.

Linked in a vague, undefined way to "participation" marks.

CIQ Responses 2007

Enrolment = 47

The feedback loop

Opportunity to make changes, respond to CIQ

CLASS
T & Th

Student CIQ responses
Thursday night

Full-class discussion of CIQ responses first thing on Tuesday

Responses

Feedback on course logistics (allows instructors to respond quickly):

I was surprised by the lack of time provided to discuss our group projects.

i think that the organization of marking/presenting the posters was a little haphazard/confusing

I found the poster group assessment form confusing because to my knowledge, there were no direct instructions on how to complete the form.

I really enjoyed the extra socializing that happened when the field trip fell through.

I realized now that its midterm time how much im learning in this course even though we have no tests, it just makes me think about my university career and why its so centralized around tests.

Responses

Feedback on CIQs themselves:

I'm glad that the CIQs are discussed briefly at the beginning of each Tuesday class - it's good to know what some of my peers have written, and to realize we have so many thoughts in common.

I am starting to get questionnaire burn out from all these CIQs. It is hard to find stuff to put in them.

Responses

Observations about one's own learning:

I ... find that it helps me to understand these concepts when I must try to explain them.

I realized that I was very comfortable discussing details, while I found it difficult to talk about general concepts.

I felt most engaged while explaining my groups poster to other students. This surprised me because I DO NOT enjoy engaging in discussions, or really participating in class at all. I considered dropping this class because of the format, but decided that it would probably be good for me to challenge my 'comfort zone', it seems to be working :)

Marking was probably the most engaging because we had to try and key in on the important things

It is continually interesting that no one feels comfortable or confident that students will not voice the answer to a question when a large percentage of the class certainly knows the answer/has a valid perspective or point of view.

I think that I am realizing that ultimately what I a do my undergraduate degree in really is irrelevant in the long run. It very much is an exercise in learning how to learn, how to articulate thoughts and ideas and in the midst of it all attempt to create some vestige of responsibility.

Responses

Observations about one's own learning, continued:

I didn't find anyone confusing or puzzling this week. Rather, I find my own actions puzzling. I noticed that I had question to ask, or want to answer question of the speaker but didn't know how to word it....couldn't bring the courage up and so gave up....I don't know what I was waiting for.

I was surprised that I volunteered to be a spokesperson for our group. I dislike presenting, but apparently not as much as I think I do :)

i thought i would freeze in the townhall meeting since im not fond of public speaking, but actually, i was surprised i actually enjoyed being in the meeting~

I was surprised how quickly I was able to write my research paper once I got started. Half the battle is sitting down and actually beginning to write! I found that the weekly written assignments really helped in practicing gathering information and drawing our own conclusions and expressing them in written form.

I was surprised at how much I'm putting of writing the draft even after narrowing escaping with my life on the extention of the due date. When will I ever learn?

Responses

Interactions with other students:

One of my partners from my group for the poster was very encouraging when I was nervous to present.

I was [pleasantly] surprised that students were taking the initiative to form ESSA - I'm definitely joining in!.

I felt that there are a lot of people in this class that tend to "dominate" the group during discussion sessions and I feel like I can't get a word in edgewise. I guess this is how I felt "distanced" from what was happening. However, there is no one to blame but myself for not speaking louder or perhaps with more assertion.

Strangely enough, I did not feel we are opposing each other during the debate; instead, I felt that we're helping each other to learn. It felt great.

when we were presenting the poster I felt like I couldn't abandon my poster because I had little confidence in the ability of my group mates to present it and I didn't like feeling dependent upon them for marks.

Responses

Other realizations:

Terrified to find out i knew so little.

I'm learning not to get surprised in this class otherwise i will start to feel dumb.

I became a little frightened today in class. Although I'm passionate about the environment, I don't think I've been committed enough to become involved in issues. I also feel like I need to research more on these subjects. I guess it's never too late to start!

...when i realized that nothing can really be done to save the polar bears

What have we learned?

The CIQ can produce useful timely feedback for instructors AND provide an opportunity for student reflection.

Important:

1. Explain the purpose of the CIQ & the benefit to students. Reiterate.

2. Keep the feedback loop active (e.g. CIQs each week on Thursday, address some comments from the CIQ the following Tuesday).

3. Keep it anonymous.

This time: Added Pseudonyms; Link CIQ to learning goals through communication each week; emphasize the loop.