

Appendix 4

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Learning and Teaching Paradigms

The idea of a map on this topic came from Randy Bass at Georgetown University (“Engines of Inquiry”)

Traditional Teacher-Student-Information Relationship (Exaggerated)

Assumptions

Students aren’t yet ready for direct contact with complexity and controversy.

Faculty are the information experts, who mediate between information and students.

Flow Information —————> Faculty —————> Students

Result

“Learning” is transmission of information; learner is passive (and often bored).

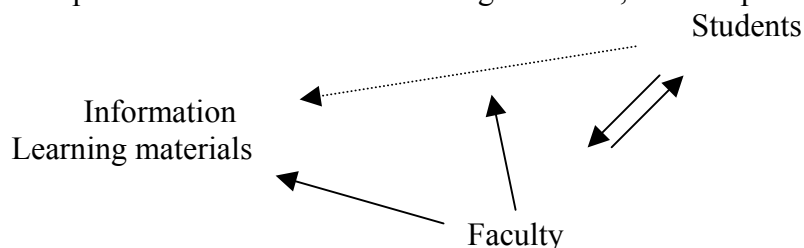
Conventional Teacher-Student-Information Relationship

Assumptions

Students can handle mediated contact with selected information.

Faculty are experts in information and learning materials, who shepherd students through contact.

Flow



Result

Learning is both transmission of information and supervised direct contact with learning materials; learner is more engaged.

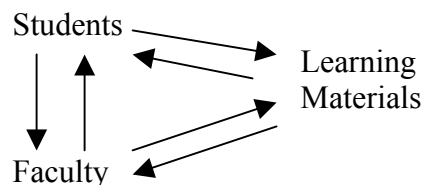
Collaborative Learning: Faculty and Students as Co-Learners (CIDD)

Assumptions

All learners should be in direct contact with information, in the company of peers.

Faculty are facilitators who create learning situations and model skills for working with content.

Flow



Result

- “Learning” is working directly with information and with learning materials: struggling, reflecting, searching out more, application; the goal is not more information, but *knowledge*.
 - Students and faculty are co-learners; each is a source of information and knowledge and each is responsible for her or his personal learning, with the support and collaboration of others.
 - Learning may feel (and be) messy, chaotic, risky, at times overwhelming.
- The pay-off: Learning is interesting, relevant, complex, rich, real, and transferable to life.

CHRONIC ILLNESS, DISABILITY AND DEAFNESS
Winter Quarter 2003-2004
Joli Sandoz

THICK DEFINITIONS AND DESCRIPTIONS	
Definition of Terms	A “thin” definition or description lists facts. (It is a little bit like a photograph, in that it describes the surface characteristics. A related concept: one-dimensional.)
	A “thick” definition or description is more layered and complex, containing facts AND explanation, example, detail, even in some cases feelings and meanings. (Related ideas: textured, multi-dimensional.)
Analogy	Two ways to think about the difference between the “thin” and “thick” is to compare looking through a window (“thin”) with watching a documentary (“thick”), or skimming a brief plot outline such as Cliff Notes (“thin”) with reading an entire novel (“thick”).
Examples NOTE: YOUR THICK DEFINITIONS SHOULD BE SEVERAL SENTENCES LONGER THAN THESE!	“Thin” definition of society : “Society means people.”
	“Thick” definition of society : Society means people who share significant things in common. “U.S. society” is a community or group of people who mostly share a language, a government, and an identity based in such symbols as the Fourth of July. Television stations, music, and so on help give U.S. people something in common.
	One “thin” definition of disability : Disability is “the <i>social</i> consequences of having an impairment.” (Source: <i>Disability Awareness in Action</i> ; definition is from the social model point of view)
	One “thick” definition of disability : Disability is “the disadvantage or restriction of activity caused by a contemporary social organization which takes little or no account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities.” (Source: Union of the Physically Impaired Against Segregation, or UPIAS). An example of disability is when someone whose legs are paralyzed (impairment) cannot attend a class (disability) because his wheelchair will not fit through the classroom door.
Background	The terms “thick” and “thin” are taken from research methodology. In his book <i>The Interpretation of Cultures</i> (New York: Basic Books, 1973), anthropologist Clifford Geertz built on Gilbert Ryles' ideas of “thin” and “thick” description to explore ways of communicating understanding about cultures. We are using the word “definition” to distinguish our work from anthropological “description,” which is much more complex and in-depth than we are attempting.

Cognitive Mapping Instructions

YOU are the resource for this activity! This is a map of your thoughts/responses/beliefs/opinions -- there is no “right” or “wrong” here, only writing down what you’re thinking. You will not be asked to show this map to anyone unless you choose to do so. The map might also be useful when you reflect on your learning in this course, and as you write your self-eval.

Note: The instructions here are written to apply to chronic illness and disability acquired as an adult. Please amend these if you wish. Some other possibilities you may wish to focus on instead include adult-acquired chronic illness by itself, disability by itself, a specific illness or disability, congenital illness (such as children born with HIV/AIDS) or disability, or disability or chronic illness acquired as a child or adolescent. Choose the situation that is most interesting to you, or do the exercise several times for different situations. If you have trouble getting started, try thinking of a specific person or situation of chronic illness or disability.

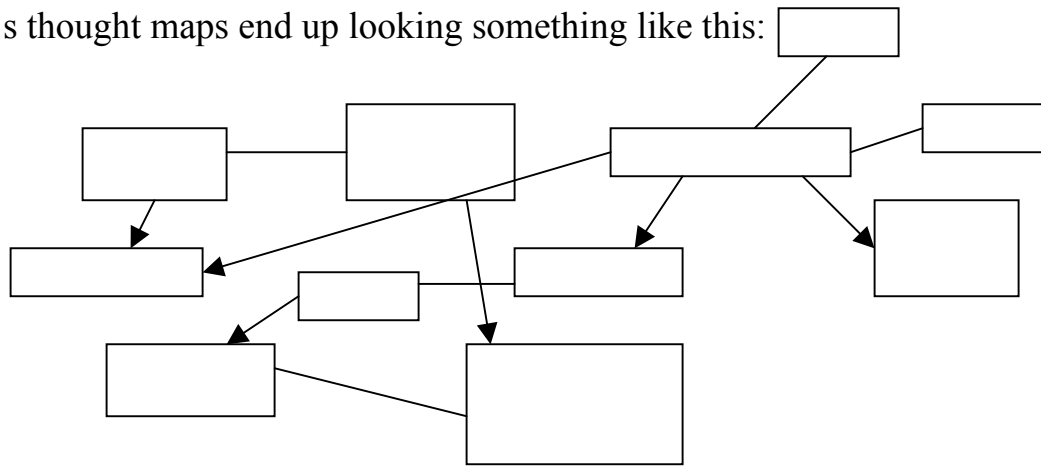
1. When you think of acquired chronic illness and disability, what words/concepts/beliefs/responses/opinions come to mind? (Draw ideas from your own experience, from our readings so far, a combination of both, other sources. The sources of what you write down are up to you.) Write one word or a short phrase per card on the cards provided. If you’re worried about making a “mistake,” spend a little time first listing things out on a piece of paper, and then write on the cards.
2. Lay the concept cards out on a piece or two of poster paper, in a random bunch or in a circle, around and below a main card you’ve labeled “chronic illness and disability” (or the central focus you chose). (See example. Avoid placing the cards in straight rows or columns.)
3. Sit back and take a look. Feel free to move cards around as seems good, and to make additions or changes.

Cognitive Mapping Activity, Page 2

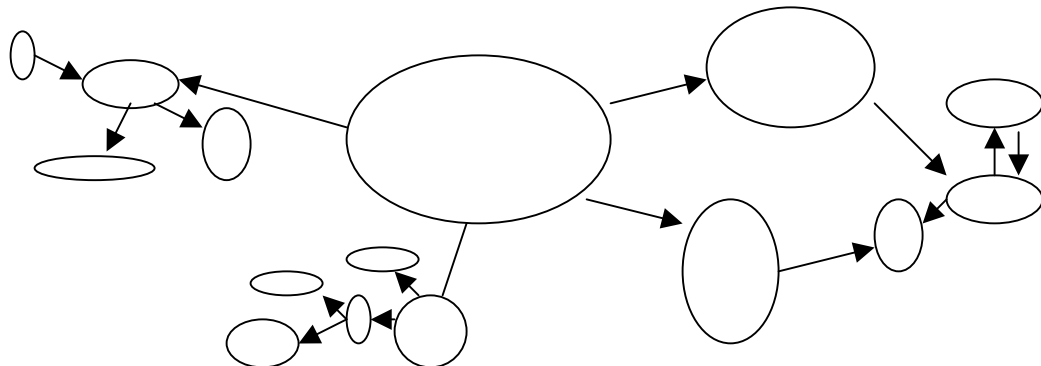
4. When you feel comfortable with the concept cards and their order, draw a line between those you feel are connected, with an arrow if applicable to show the direction of the relationship.
5. Redraw and rearrange as many times as you like until you feel satisfied with the result as a map of your present thoughts/beliefs/opinions/responses on the subject. (You're allowed to change your mind later!)
6. We will use these maps as a way to order our thoughts for discussion. Again, you do not have to show yours to anyone. But you may want to keep it at least until the end of the course.

These instructions are adapted from those in Wiginton, Kristin L. and Deborah Rhea. "Cognitive Mapping." *Women's Sport and Physical Activity Journal*. 8:2. Fall, 1999. 66-67.

Many people's thought maps end up looking something like this:



Or this:



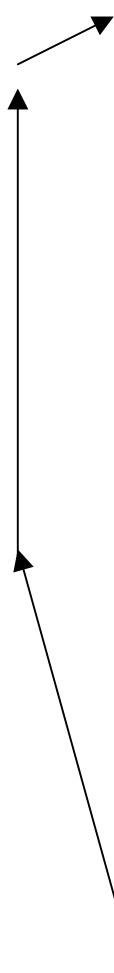
Cognitive Mapping Activity, Page 3

This is a warm up activity, before we do the cognitive maps. I give students one of these tables without any of the words in the left column on it. Then I read the words one at a time, and they fill in the blanks.

Idea/word	Your immediate response tonight (might be an image, scene, person, feeling)	Associated feelings and/or value judgments	Where/when/in what context did you first experience this response to this idea?
Healing	<i>Bitter-sweet (physical healing)</i>	<i>A good thing; not possible for all chronic illnesses and disabilities</i>	<i>Visiting home of friend when I was 12 or 13—mother ill</i>
Disability			
Pain			
Illness			
Chronic			
Health			

Chronic Illness Disability and Deafness: Making Knowledge I

Many Evergreen faculty rely on a particular process or practice of learning in designing and facilitating what happens in and out of the classroom. We don't break down the steps or envision the entire process in the same way, although many of us stress student responsibility and involvement in learning, and the importance of learner reflection and application of ideas. In this program, my vision of the learning process will be recognizable in these ways:



Learning phase or activity	Program Activity
Introduction ↓	Mini-lectures to introduce concepts, and your first time through course readings
Writing to reflect ↓	Re-reading, thinking and writing after reading <ul style="list-style-type: none"> • <i>Refuge</i> paper • <i>Seeing Voices</i> papers
Experience/exploration ↓	In-class activities for exploration and application, seminars, discussions
Making knowledge ↓	Connections and insights, analysis and interpretation.
Integration ↓	Formalizing your insights, connections, interpretations. <ul style="list-style-type: none"> • Integrative assignments: Week 5 paper, quantitative write-up, Week 10 integrative paper, <i>Searching for Meaning</i> portfolio postings. • Some TESC students keep journals of both class notes and personal reflections, for their own use. Recommended but not required in this program.
Putting knowledge to use ↓	Trying out your ideas and answers, at work or during other situations.
Reflection and evaluation	Thinking about and evaluating the knowledge you've made and your work to apply it. <ul style="list-style-type: none"> • Student self-evaluation

The first goal is that each of us practice skills and gain experience in each phase of (and the entire) learning cycle. Writing, listening, talking and the give-and-take of conversation are key skills related to exploration and the making and using of knowledge, as are learner self-assessment and critical reading. Our end goal in the classroom is the making of knowledge, by each person in the program.

MAKING KNOWLEDGE II

**Knowledge
is . . .**

partial

contextual

relative

evolving

See yourself as one source and locus of knowledge about CIDD

- Identify your own questions, opinions and conclusions
- Take your own experience seriously enough to reflect on it



Make personal knowledge about CIDD

- Be aware of your own emotional reactions (including fear) to learning/knowning about CIDD
- Be aware of your own emotional reactions to the idea of making knowledge, and making knowledge public
- Articulate your personal experiences, opinions and conclusions clearly and publicly



Understand and practice the fact that you have a role to play in making collective knowledge about CIDD

- Take a regular, civil, thoughtful and honest part in dialogue, including Blackboard responses and conversations
- Acknowledge others' positions in a real way, by respectful and deep listening and response
- Incorporate those positions into the formation of new understandings, when these seem to you to be relevant and significant



Accept personal responsibility as one who participates in knowledge-making, and does so within a larger context

- See knowledge as active, an entity with import; be accountable for the effects of your own opinions, etc., on listeners, and on others' lives
- Affirm the importance of multiple sources and voices, and of standards of legitimacy
- Identify your standpoint along social and cultural power axes (status in relation to CIDD, race, ethnicity, gender, age, religion, physical ability, sexual orientation, etc.), and the impact of that standpoint on your knowledge-making activities
- Understand and practice the reality that knowledge is affected by power, in its making, legitimization, communication, access, and impact

Responding to Course/Program Members' Work: A Workshop

Note: *If time, ask program students to write answers to the four questions below, exchange papers several times (so no one knows who has whose paper), and then read the answers aloud in round robin style, one question at a time. The point is to put program members on the same level, through realizing that everyone shares roughly the same fears – and that everyone is afraid. Also, that most people see similar barriers and priorities in relation to peer feedback. The answers given here are from students in programs taught before this year.*

Biggest fear about giving feedback . . .

Students in an Evergreen program said . . .

- Someone takes criticism as personal and feels attacked
- Having to give feedback on a paper so bad it can't be fixed
- My response won't be helpful
- Sounding harsh without meaning to

Biggest fear about receiving feedback . . .

Students in an Evergreen program said . . .

- No one takes my work seriously
- People put very little effort into responding
- Not getting any feedback
- The responder hates my paper!
- My paper won't be as good as everyone else's paper
- Not understanding the person's response
- Being challenged on a personal level instead of an academic level

What's the biggest barrier to giving feedback, do you think?

Students in an Evergreen program said . . .

- Worry about hurting people's feelings or seeming to patronize the writer
- Afraid will insult or demean writer's ideas and feelings without meaning to
- Concern about making a mistake (misunderstanding what the writer meant)

What's the most important thing you want from other people's feedback?

Students in an Evergreen program said . . .

- Honesty
- Intention to help me improve and learn
- Getting the feedback at all is the most important thing!

Three options for giving feedback . . .

I. *Focusing on yourself*

- Responding to the paper by telling a story or an event from your own experience, without explaining why you think this information might be useful to the writer.
- Stating that you agree or disagree, without directly noting why in a way that leads the writer onward.
- Judging the writer's work (good or bad), without going further.

II. *Helping the writer know what s/he communicated*

- Summarize what you understood from what you read, in a sentence or two at most.
- Identify powerful words, words that stood out as you read (two to three per page max).
- Mention ideas, concepts, directions hinted at, but not developed. What's "hiding" in the piece that you wish the writer had told you more about?

III. *Making knowledge collaboratively (helping each other toward better writing and thinking)*

- Acknowledge the author's work, including any insights or new understandings you gained from reading the posting
- Engage with the author's ideas
- Move the ideas and thoughts another step onward . . .
 - Make connections to another reading or something else.
 - Mention something relevant you're not sure the author thought about, especially something from our reading or work together.
 - Ask a question about an idea (not a fact).
 - Suggest an analogy or a metaphor.
 - Say you agree or disagree AND tell why with reasons based in thought.
 - Write relevant thoughts the paper led you to; you may want to ask for feedback on this additional thinking, from the writer or from other readers of your peer response.
 - Tell an experience of your own AND state explicitly how you think it connects to and advances the author's ideas. Use experience as a source of knowledge.
 - *Suggestion: Leave mental and emotional room for the author to respond if she or he wishes. This is a conversation!*

Model Responses

I personally don't do like to provide model responses. People may try to memorize a formula.

Practice Responding (and the Philosophical Discussion)

As a next step, we work with two or three short passages from the papers of former students who have given permission. I put paragraphs on the board or into Powerpoint, and let small groups (ideally, reading circle members who will be responding to each other's work) discuss their response before talking about responses and general approaches in the full group. Many questions come up, including our stance and ethical responsibilities toward each other. *(I usually encourage people to take the role of helpful friend, and discourage feedback about grammar or other mechanics.)*

Questions to discuss in your reading circle . . .

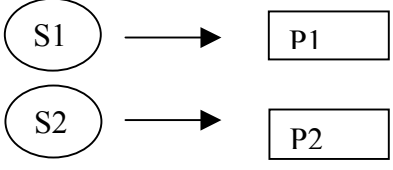
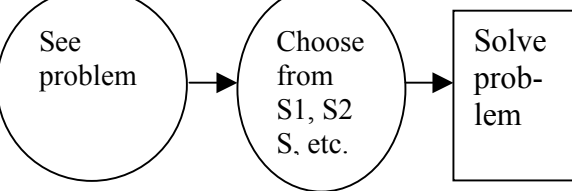
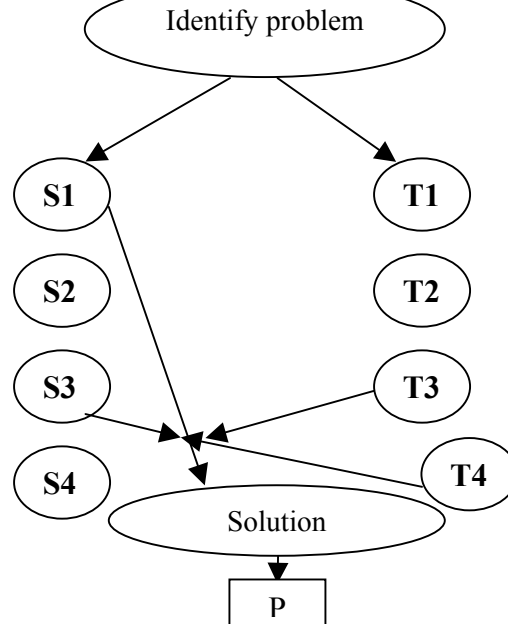
As a last step, reading circles discuss these questions.

- What's the purpose of our work together?
- What will we do if a writer does not provide a piece for feedback?
- What will we do if a responder's feedback falls outside the guidelines?
- How will we know if and when our work together has been successful?

As follow-up activities as the weeks pass, I bring in one or two more paper passages to discuss, provide feedback to students on their own response writing (as part of the scheduled periodic faculty feedback on writing), and may choose two or three responses during the quarter to praise as examples of work strong in specific ways.

END of Responding to Course/Program Members' Work: A Workshop

CONVENTIONAL CLASSROOMS: STATIC SOLUTIONS TO NEAT PROBLEMS

“Neat” Models of Approach to Professional Problems	Classroom Learning	Assumed Relationship of Classroom Learning to Problems
Apply memorized solution to specific common problem	Problem identification (P1, P2) Learn specific solutions S1, S2, S3, etc.	 <pre> graph LR S1((S1)) --> P1[P1] S2((S2)) --> P2[P2] </pre>
Learn several possible solutions, learn problem recognition so can choose correct solution to solve problem	Problem recognition Learn possible solutions S1, S2, S3, Etc.	 <pre> graph LR A((See problem)) --> B((Choose from S1, S2 S, etc.)) B --> C[Solve problem] </pre>
Learn various solution parts (concepts, theories, others' solutions in similar situations, etc.), that can be crafted together into an appropriate solution Learn tools to use to build a solution (communication skills, collaboration skills, etc.)	Problem Assessment Learn solution parts S1, 2, 3, 4, etc. Learn tools to craft solution T1, 2, 3, 4, etc.	 <pre> graph TD IP([Identify problem]) --> S1((S1)) IP --> T1((T1)) S1 --> Sol([Solution]) S2((S2)) --> Sol S3((S3)) --> Sol S4((S4)) --> Sol T1 --> Sol T2((T2)) --> Sol T3((T3)) --> Sol T4((T4)) --> Sol Sol --> P[P] </pre>

Each of these assumes . . .

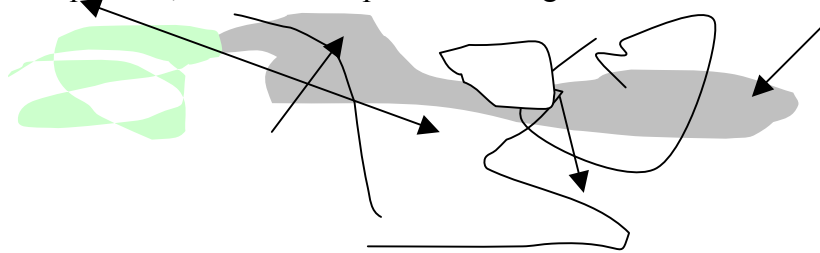
- Problems are recognizable.
- The same or very similar problems appear again and again.
- The same or very similar solutions work for similar problems appearing in any context.
- Problems can defined and identified as something apart from solutions.
- Solutions can be successfully matched to problems.
- Problems can be defined and solved.
- The problem/solution model is a useful representation of life situations.

None of these assumptions necessarily apply to human beings!! Teaching specific problems, and specific components of solutions, is like teaching numbers . . . when we need mathematics.

Preparation for “Messy” or “Wicked” or “Ill-Structured” Situations

Assumptions and Model for *Social Roots and Chronic Illness, Disability and Deafness*

Situations we encounter in human service work (and in relating to human beings) are frequently complex and dynamic. Specific circumstances shape that particular situation: the individuals involved, the weather, the design of a chair, an interruption in power to a computer, a misfiled form. These circumstances have never come together in this way before, and never will again. There may be many causes, or many ways to explain the situation, and each one of these suggests a different response. It is impossible to define a situation cleanly and fully, and to identify a “right” response. Every response changes the situation. Situations are rarely neatly resolved; instead, they evolve. Useful broad patterns related to these “messy” or “wicked” situations, and generalized approaches for responding to these patterns, can be developed. Knowledge is discovered in action.



Cognitive Flexibility Theory

“Cognitive flexibility theory focuses on the nature of learning in complex and ill-structured domains. Spiro & Jehng (1990, p. 165) state: ‘By cognitive flexibility, we mean the ability to spontaneously restructure one’s knowledge, in many ways, in adaptive response to radically changing situational demands...This is a function of both the way knowledge is represented (e.g., along multiple rather than single conceptual dimensions) and the processes that operate on those mental representations (e.g., processes of schema assembly rather than intact schema retrieval).’”

From Greg Kearsley “Cognitive Flexibility Theory.” Explorations in Learning & Instruction: The Theory Into Practice Database. Retrieved March 21, 2004.

<http://tip.psychology.org/spiro.html> . The Spiro and Jehng quote is from: Spiro, R.J. & Jehng, J. (1990). “Cognitive flexibility and hypertext: Theory and technology for the non-linear and multidimensional traversal of complex subject matter.” D. Nix & R. Spiro (eds), *Cognition, Education, and Multimedia*. Hillsdale, NJ: Erlbaum.

MORE INFORMATION ABOUT MESSY PROBLEMS

- Buchanan, Richard. “Wicked Problems in Design Thinking.” In Victor Margolin and Richard Buchanan, eds. *The Idea of Design*. Cambridge, MA: MIT Press, 1995. 3-20.
- Conklin, Jeff. “Wicked Problems and Social Complexity.” Accessed November 28, 2004. CogNexus Institute. Available at <<http://cognexus.org/wp/wickedproblems.pdf>>.

A very nice set of diagrams compares characteristics of “ill-structured” and “tame” problems, at <http://www.stanford.edu/~rhorn/a/kmap/mess/CmprngIllStrctrd7Tame.pdf> . (Some of the assumptions at the top of the page are adapted from this site.) An interesting attempt to map a messy problem (public health service delivery to aged and disabled clients in Alameda County, by R. E. Horn) can be found at <http://www.stanford.edu/~rhorn/a/kmap/mess/messAlamedamap.v7.1.pdf> . There’s another R. E. Horn map, “Mental Health Services Dynamics and Dilemmas” depicting things in Multnomah County, Oregon, at <http://www.stanford.edu/~rhorn/a/kmap/mess/messPortlandmap.pdf> . These are maps of service delivery, not of problems – but the service delivery process and environment *may often be* the problem, from the client’s point of view.

Asking Generative Questions: A Workshop

Students first read an article entitled “What Is Feminism?” and came to class with five written questions about it.

Workshop

1. I asked students to volunteer an object for discussion, from anyone’s pocket or backpack, and we listed questions about it on the board.
2. Mini-Lecture: I introduced the idea: “The questions you ask shape what you know.” We went over the two handouts following, “Writing Your Paper” and “Thought-Provoking, Generative Questions.”
3. Small groups discussed the “What Is Feminism?” article, and came up with a written list of three to five generative questions (after looking at the questions they had brought to class), which they put on the board. We went over each question to determine whether it was close- or open-ended, and whether the response it asked for might be interesting in terms of making knowledge.
4. At the end of the workshop, we briefly discussed the ladder of abstraction handout below, and the relationship of detail and abstraction/generalization to making meaning, and to good writing.

Writing Your Paper: The Questions You Ask Shape What You Learn

You can learn about yourself . . .

- Self reflection: What is my emotional response to this reading?
- Journaling: What in my life does this connect with, and how?

You can learn or revisit facts, concepts, ideas . . .

- Summarizing the reading: What did this author say?
- Identifying what you've learned that's new to you: What new information have I learned?

You can strive for deeper understanding of the text . . .

- Formal analysis: What does the structure of this work communicate to readers? Who seems to be the intended audience? How does the author use figurative language? How does the author use setting to portray women?
- Speculation: What would this story have communicated if it had been set in the city instead of a suburb? What if Kris had been male instead of female?

You can critique the author's work . . .

- Evaluation: Was the author's argument logical? Did the author provide enough evidence for his or her conclusions?

You can explore what you think . . .

- Disagreeing or agreeing: I think this is baloney because . . . This makes sense to me because . . .
- Argumentation: If I took a position disagreeing with the author, I would say . . .
- Interpretation: What does this mean?

You can build on what's said . . .

- Elaboration: What additional information can I add, to take this idea farther?
- Application to a situation outside of the text: How would I apply this idea at work? What does this mean for U.S. citizens who want to live in safe cities?
- Connections: How does this reading connect to our other learning to date? To what I've learned outside of this course/program? How do the ideas or the theory in this reading help me understand or analyze that other reading?
- Explore implications: If someone applied this idea at work, what would be the ethical ramifications? What would be the impact on the environment, or on co-workers?

Thought-Provoking, Generative Questions

Questions can fill a number of purposes. The most common reason to ask a question is probably to obtain information. But . . . a certain type of question can serve an important specific purpose when people are working together to broaden and deepen their understanding (face to face, online, or through scholarly dialogue such as conference presentations and published papers). These questions can nudge or even shove people toward new ideas and deeper learning. Research shows that just thinking up these questions promotes learning!¹

This thought-provoking role is filled by a certain type of question, one we'll call generative. To "generate" is "to cause something to exist"; "generative" means "able to produce or create something".² Generative questions:

- Promote beyond-the-obvious understanding and inquiry
- Are open-ended, keep the conversation going -- don't have final, definitive answers
- Tend toward the divergent – that is, toward opening a topic or idea outward, into new conceptualizations and ideas
- Often concern relationship between two ideas, or a fact and an idea, or an idea across two texts/authors/artists/etc.

Four metaphors for the roles of this type of question in collaborative learning:

- Generative questions open a new window, bringing light and air to the discussion and allowing participants to see from a new angle.
- Generative questions can create a bridge between two or more ideas or concepts previously unconnected.
- Generative questions can act as a pry bar, to open new space for thinking.
- Generative questions can act a woodcarver's chisel, cutting away extraneous material to reveal a new shape.

Close-ended questions temporarily stop inquiry. The conversation may continue, but shared thinking does not – until an open-ended question is asked. Here are some generic *close-ended* questions often asked about literary texts:

- When was this written? What else has this author published? Did that happen before or after that character died? Is Cleveland really on the Ohio River, or did he make that up?

Here are some generic *open-ended* questions, the generative kind that open into more thinking:

- How does the setting of this story shape the action? What assumptions lie behind that character's comment, and what do they tell you about that character? What do you think the author wanted us to understand from all of the references to the sun (or some other image) in that chapter? How does this author's portrayal of childhood compare with that author's story about childhood? How are women represented in this poem?

If you feel you need more help getting started in asking generative questions, check out the list of questions at <http://www.bedfordstmartins.com/litlinks/fiction/readfict.htm> . These questions to ask about fiction specifically come from publisher Bedford/St. Martin's. Each section is begun by a close-ended question in bold type, but the questions below it are mostly generative questions. (There are generic questions for poetry at <http://www.bedfordstmartins.com/litlinks/poetry/readpoet.htm> .) Generic questions to ask of texts from a gender studies angle, can be found at http://waol.blackboard.com/webapps/portal/frameset.jsp?tab=courses&url=%2Fbin%2Fcommon%2Fcourse.pl%3Fcourse_id%3D_7084_1 .

¹ Ciardiello, Angelo V. "Did you ask a good question today? Alternative cognitive and metacognitive strategies." *Journal of Adolescent & Adult Literacy*. 42:3. Nov. 1998. 210-219. Page 212.

² *Cambridge Dictionary of American English*. Cambridge Dictionaries on Line. <http://dictionary.cambridge.org/default.asp?dict=A> . September 28 2004.

Study of Student Questions

Laura Greene studied 500 student questions during one quarter of her basic composition class at Augustana College. The tables below are adapted from her study. (The separation of the questions types into most and least useful are Joli's distinctions.) Greene noted that most of her students did not realize that questions could be asked, not just to obtain information or clarify a point, but to deepen and broaden understanding and knowledge. Perhaps as many as three of every four questions Greene's students asked were of the "least useful" type.³ This is not an isolated finding; other researchers have noted that even graduate students fail to ask questions that provoke thought.⁴

Questions *Most* Useful in Deepening Understanding and Making Knowledge Collaboratively About A Text

Question Type	Definitions/Criteria (The wording in this column ↓ is Greene's.)	% of All Questions Studied
Interpretive Comprehension	These questions can be answered from within the text, but answers are not stated explicitly in the text.	14.7
Implication	These questions examine some broader idea elicited by the text, but still directly relevant to the text, e.g. consequences, solutions.	5.2
Challenging/Testing	These questions challenge or test some part of the argument.	4.8
Integration	These questions seek to put separate ideas or essays into conversation, e.g. applying a concept from one text to another.	2.8
Significance	These questions seek to determine the relevance or impact of the argument in the broader scheme of things.	1.4
Self-Reflection	In these questions the reader interrogates him- or herself as a result of what s/he's read [to consider implications related to own experiences]	.35
TOTAL "MOST USEFUL" QUESTIONS		29.25 %

Questions *Least* Useful in Making Knowledge Collaboratively About A Text

Question Type	Definitions/Criteria (The wording in this column ↓ is Greene's.)	% of All Questions Studied
Elaboration	These questions seek information external to the text.+	27.6 %
Basic comprehension	These questions are answered clearly in the text.	22
Non-Interrogative	These questions are more accurately defined as statements masquerading as questions. They are often rhetorical, and frequently their intent is critical.	15.4
Loose Implication	These questions examine some broader idea that the text elicits only tangentially; the question moves away from the text.	5.6
TOTAL "LEAST USEFUL" QUESTIONS		70.6 %

+This category may have contained some generative questions, in our terminology. I put them here since Greene said they were asked to "seek information"

³ You can read Greene's research for yourself at <http://kml2.carnegiefoundation.org/html/poster.php?id=512>. Greene, Laura. "Toward a Model of Student Questioning." Summary of a project for the Carnegie Academy for the Scholarship of Teaching and Learning. June, 2004.

⁴ Ciardiello, Angelo V. "Did you ask a good question today? Alternative cognitive and metacognitive strategies." *Journal of Adolescent & Adult Literacy*. 42:3. Nov. 1998. 210-219. Page 212.

Making Meaning with Hayakawa's Ladder of Abstraction

The "Ladder of Abstraction" is a way to think about different "levels" or "dimensions" in representation. Sometimes it's better to work with concrete particulars, and sometimes with more abstract ideas. Usually writers of fiction and poetry work with both, although the concrete may SEEM to be all there is to the work.

For example, say we have Bessie – a very particular cow – standing before us. We can talk about her as a character – her traits, scars, coloring, etc. But when she and three others break out of the pasture, all we need to know is that "The cows are out!". Cows can be usefully grouped for the purposes of veterinary medicine, and so on – one doesn't need a degree in Bessie's anatomy in order to operate successfully on her; previous knowledge of cows in general will do. There are also situations, such as tax time, in which cows aren't considered "livestock" but instead some form of "asset," and grouped together with other assets. This high level abstraction (we're several big steps away from Bessie herself at the moment) also has its uses.

In the same way, it's fine to talk about Cinderella and how mean her stepmother was. But the story doesn't have much impact unless we move up the ladder a couple of rungs – say, to thinking about how "young single women" (abstracted from "Cinderella") are still today under the influence of "older married women" (abstracted from Cinderella's mean stepmother). Another move from the first step and on up the ladder would be to go from Cinderella's perceived need for a ball gown in order to be attractive to her particular prince (bottom rung), to the role clothing plays in gender construction and why (close to the top).

Writers of all types generally find it useful to rely on detail or specifics (bottom of ladder) to illustrate more abstract ideas. Personal experience is often used to clarify a larger point; so are details taken from a story used to illustrate an idea in an academic paper. For example, one can use the Shapiro-Chicago idea about "women's forms" in art (cavities) as a way to make more clear a larger point -- say, the idea that one common way to think about women is the essentialist approach. (A paper writer might use the women's forms idea as a concrete example of the essentialist approach.)

It's easy – but usually mistaken – to think that the details or specifics ARE the story, when crafting or thinking about a piece of writing. Meaning begins in (is grounded in) the concrete, but is actually located higher up the ladder.

You can see a diagram of S.I. Hayakawa's Ladder of Abstraction as Figure 5 (scroll down) in Burchill, Gary and David Walden. "Language For Action: New Concepts to Address Soft Side Management Issues." *Center for Quality of Management Journal*, 4:4 (Winter 1995), 21-28. October 13, 2004.

<http://cqmxtra.cqm.org/cqmjournal.nsf/0/0b5619c30c8ce858852567be005e4f6c?OpenDocument>>.