Critical Thinking and Discourse in Distance Education and Traditional Education

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Chair: Yusra Visser

Session format

- Overview of critical thinking
- Critical thinking in conventional education
  - Embedding critical thinking in traditional education
  - Current instructional practice and critical thinking in traditional education
- Critical thinking in distance education
  - Embedding critical thinking in distance education
  - Current instructional practice and critical thinking in distance education
- Challenges and opportunities for enabling critical thinking in traditional and distance education.

Questions framing this session

- If we agree that the classroom is – and has been – the primary traditional place for learning, how then, have we met the need to focus on critical thought and discourse in that learning environment?
- Further, how can we focus on critical thought and discourse in the asynchronous distance education environment?

Assumptions

Critical thinking and discourse:

- Play an important role in all levels of education, and particularly in graduate-level education.
- Should create new understandings among learners.
- Are central in where quality, cost, and continuous adaptation to the changing environment are major drivers for what people do in the workplace.

Critical Thinking

- What is Critical Thinking?
  - A disciplined manner of thought that a person uses to assess the validity of something (statements, news stories, arguments, research, etc.)
  - Involves asking questions, defining a problem, examining evidence, analyzing assumptions and biases, avoiding oversimplification, considering other interpretations, and tolerating ambiguity.

Relevance and applications of critical thinking

- underlies reading, writing, speaking, and listening… the basic elements of communication
- plays an important part in social change . . . institutions in any society - courts, governments, schools, businesses - are the products of a certain way of thinking
- the willingness to change one point of view as we continue to examine and re-examine ideas that may seem obvious. Such thinking takes time and the willingness to say three subversive words: *I don't know*.

Paul, Elder, Bartell

- 38 public universities, 28 private universities in State of California
  - Assess current teaching practices
  - Knowledge of critical thinking among faculty
  - Identification of exemplary practices in teaching critical thinking

Some findings

- 89% claimed critical thinking to be primary objective of their instruction
  - 19% could give clear explanation of critical thinking
  - 9% were clearly teaching for critical thinking
  - 8% could clearly differentiate between an *assumption* and an *inference*
  - 4% could differentiate between an *inference* and an *implication*.
- 67% said that their concept of critical thinking is largely explicit in their thinking
  - 19% could elaborate on their concept of critical thinking

Some more findings:

- 81% felt that their departments graduates develop a good or high level of critical thinking while in program.
  - 20% said that their departments had a shared approach to critical thinking
  - 9% were able to clearly articulate how they assess the extent to which critical thinking was being fostered.

Critical Thinking in Distance Education

- Synchronous communication
- A-synchronous communication

- Learning environments must be designed to promote critical thinking: i.e. appropriate instructional design
- Those who teach should at least have a basic knowledge of the concept of critical thinking (model instruction for critical thinking in their own instruction)

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Critical thinking in practice

University students are supposed to:

- develop own point of view
- avoid being spoon-fed
- be critical

But…

- Also to produce the right answer (adhere to the system)

Distance education students and critical thinking

- Distance education has often become an industrialized process of education/teaching/learning and frequently does not encourage/allow students to use/apply knowledge in a variety of ways.

From Fordist to Post-Fordist

Distance education organizations should move

from:

Fordist organizations: uniform products, economies of scale, hierarchically managed large divisions, standardized and bureaucratic processes

To:

Post-Fordist organizations: tailored products, decentralized approaches, empowered students and staff, new ways of doing things, dynamic, moving fast and ready for change

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D.E. has insufficiently reflected on how to include critical thinking

Example: Four areas of critical thinking:

- Creativity (adhere to industrialized process)
- Impact of language (lack of attention for specific communication skills needed in d.e.)
- Decision making (curriculum and courses are often very much prescribed-no electives)
- Meta-cognition (focus on content, not on learning)

Distance education and collaboration

One aspect of critical thinking, however, may be more advanced in distance education than in traditional education

collaboration

Ways that collaboration in d.e. is used, or can be used to promote critical thinking

Case-based reasoning (partner activities-share, check, review, tell and retell ideas)

Critiques, rebuttals around posted topics or role-play

situations (structured controversy-pro/con)

Mock trials, debates, posted arguments with logic delineated (problem-based group learning-students work together to create product or solve problem

Minute papers and reflection logs – use guided questions to stimulate thinking (individual posted journal with encouraged comments by other students)

Build graphic organizers, flowcharts, decision-making trees, concept maps (synchronous use of whiteboard - all students add to ideas and graphic) (based on McVay Lynch, 2000)

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Current Practices of Promoting Distance Education

- Learner-centered models
  - Students are engaged in critical inquiry and problem solving within the context of collaborative and cooperative environments.
    - "An institution must have a demonstrated commitment to learner-centered education" (Twigg, 2000)

Campus Computing Project. (1999). The national survey of desktop computing in higher education. [online]. Available: http://www.campuscomputing.net

Current Practices of Promoting Distance Education

- Factors the make DL predominantly learner-centered
  - Interactive technologies, growth of the Internet, and the WWW
  - Increased equity among participants and higher participation rates
  - Possibilities for students to explore their potential as thinkers and conveyors of ideas.

Current Practices of Promoting Distance Education

- "Students as thinkers and conveyors of ideas"
  - Collaborative learning – small groups- active exchange of ideas. (Riel, 1998).
  - Collaborative dialogues go through a process of conflict resolution, explanation, justification to arrive at the construction of a shared solution.
    - Critical thinking skills become sharpened by the inherent obligation in collaborative learning and in the potential of the WWW to support critical thinking in knowledge –based communities.

Riel, M. & Fulton, K.(1998), Technology in the Classroom: Tools for Doing Things Differently or Doing Different Things, AERA presentation, San Diego, April 14, In press Kappan.

Current Practices of Promoting Distance Education

- Hands-on experiences
  - DL students have the “real-world” experiences
  - F-2-F students have “real-world-like” experiences
- Problem-based and knowledge-based learning.
  - Discussion Boards
    - We hold on to recall, comprehension and application of learning topics.
    - Discuss, analyze, synthesize, and evaluate solutions to real-life problems.

What is required of the ‘players’?

- Instructors
- Students
- Course materials
- Course culture
- One Prof’s experience

Instructors?

- Course structure
- Socratic perspective
- Summary of discussion

Students?

- Participation
- Thoughtfulness
- Honesty
- Openness

Course Materials?

- Clarity of objectives
- Clarity of expectations for all
- Communications capabilities

Course/Group Culture?

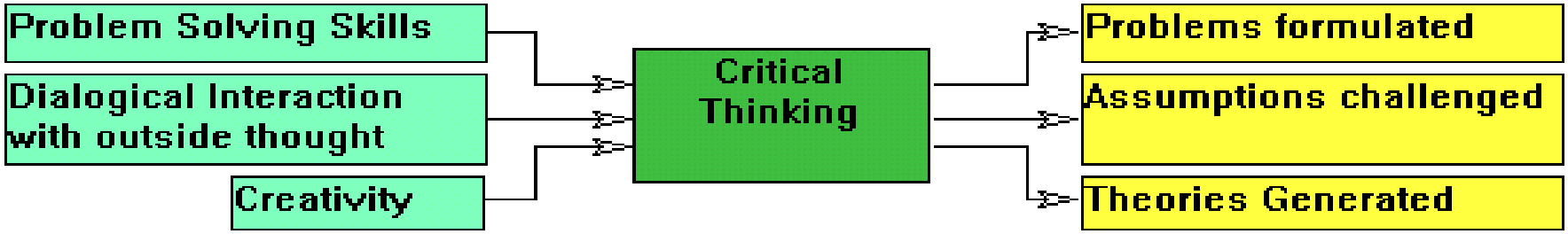
- Instructor's role
- Student's role
  - Work/play hard
  - Learn something about yourself
  - Process vs. content balance
  - Application to the real world

How can we go beyond the traditional classroom?

Virtual Teams Project

- Products
- Random assignment of teams
- 2 deliverables
  - Social contract
  - Final product
- Process vs. content
- Tools (chat, files, discussion, web)
- Empowered to enforce social contract

Definition of Critical Thinking



A process that can only happen in the presence of problem solving skills, creativity, and dialogical interaction with outside thought that results in formulation of problems, challenging of assumptions, and generation of competing theories.

McMillan (1987) meta-analysis of treatments to promote critical thinking showed the "overall college experience" to be the only researched effective treatment.

Where Undergrads look to enhance critical thinking skills

- Philosophy department
  - radicalization
  - dogmatization through historicity and syllogism
- Outside Speakers
  - Outside thought through exposure to eminent scholars
  - Current co-opted status of speaker programs
- Small classes
  - Instructors could actively encourage critical thinking
  - Rigidity of curriculum promotes acceptance of orthodoxy
- Extra-curricular activities
  - based on pre-existing areas of expertise
  - based on race, religion, gender, ethnicity.

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Anecdote from an undergraduate class.

- Class primed to discuss Critical Thinking by email message sent Saturday, asking them to make mental and physical notes of their contact with critical thinking.
- Wednesday morning responses were difficult to obtain
- No responses lasted more than 5 words
- Frequent punctuation with “You know” and “Umm”.

Where Grads look to enhance critical thinking skills

- Research and Teaching Activities
  - gradual phase in of increased levels of responsibility.
- Small classes
  - Instructors could actively encourage critical thinking
  - Some of the responsibility for what's presented in class is shifted to the students.
- Shared community of practice with instructors - collegiality.

Recommendations at undergrad level

- Philosophy and humanities courses so that students actively engage the field rather than its history.

- University speaker series resourced like a small athletic team
  - schedules - promotion - professional
    - not a matter of faculty recruitment
- Streamlined process of new class approval
- Shift of extra-curricular resources toward academics and away from exclusionaries

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Recommendations at grad level

- Increased stringency of TOEFL requirements
  - expect Socrates to speak Greek in the Agora
- Increased opportunity to participate in field at professional level through increased research and teaching assistantships
- Use of University infrastructure to facilitate peer-to-peer dialogue (e.g. using the university's computer networking infrastructure).
- Quicker approval for new courses the promote peer-to-peer dialogue.

Distance Education Considerations

- Design DE courses from the ground up so that they use the infrastructure that supports DE to support dialogue
- Recognize that students will interact both inside and outside the provided infrastructure.
  - Encourage this practice
    - continue to support this beyond 16 weeks
  - recognize student need for privacy in deliberation
- Break away from Carnegie system of setting course time limits

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Hope to hear from you!