

Victoria Stone-Cadena
CSI Writing Fellow 2010-2011

Online Courses and Critical Thinking Skills Development: Engaging students in the WAC pedagogy

Common Challenges

Over the past decade, more universities have begun incorporating online courses (aka distance learning) in lieu of and along with courses in the classroom setting. Many professors have already integrated online components into the classroom while some have translated entire courses into the online setting. There are a variety of software platforms, such as Blackboard, Sakai, Wordpress, Buddypress, wikis, and even games with student avatars which allow students and teachers to engage online in increasingly complex ways. This transformation of the classroom, and ultimately the university experience, for both students and teachers, generates the need for dynamic and engaging pedagogical styles in the virtual setting. There is a growing body of literature on ways to engage students in the online learning environment even as new technologies emerge offering even more dynamic applications.

Ultimately the development of critical thinking skills is one of the primary concerns of a university education. While psychology and education departments incorporate literature on critical thinking development, many other disciplines do not address this topic in the scholarship. The onus falls upon the teachers to develop a curriculum which teaches course content while also creating a learning environment that fosters critical thinking skill development. Indeed a broad body of literature exists on this topic.

The WAC/WID principles hold that writing to learn and writing across the curriculum will facilitate the development of critical thinking skills while also engaging students in active learning. Research on fostering critical thinking skills in the classroom can provide a variety of strategies but how does one accomplish this in an online format? The following bibliography attempts to bring together literature on online course development and strategies for developing critical thinking skills.

Research

Burbules, Nicholas and Rupert Berk,
Critical Thinking and Critical Pedagogy: Relations, Differences, and Limits in *Critical Theories in Education: Changing Terrains of Knowledge and Politics*, Popkewitz, Thomas and Lynn Fendler, eds. 1999. Routledge

Findings: The authors examine the similarities and differences between two bodies of literature within education concerned with critical thinking and critical pedagogies. This chapter is useful in orienting the reader to the history of the literature and the main contributors to each camp. Critical pedagogies, while concerned with the educational system (as with critical thinking) takes the challenge of education to the next level. Citing the structural and institutional inequalities inherent in the educational system, critical

pedagogy pushes for a revamping of access to education. The ultimate goal of critical pedagogy is the dismantling of societal inequalities through the proliferation of knowledge for all peoples. The work of Paulo Freire articulates this position quite well. The authors review the history of critical thinking and its relationship to the educational system. The authors contend that critical thinking skill development should focus on creating the dispositions to learn and think critically beyond just teaching the ability to do so.

Gillis, Kathleen, Susan Lang, Monica Norris, Laura Palmer

Electronic Plagiarism Checkers: Barriers to Developing an Academic Voice

Findings: The article was put together by academics that were concerned with the implementation of online plagiarism checkers in their program and chose to conduct research on how effective these tools would be for the department. In summation the author states that, “the results suggest that plagiarism detection applications are not productive tools for WAC instructors as the applications’ approach to writing is inconsistent with WAC pedagogy. That is, in lieu of good pedagogy, the applications often penalize students for doing exactly what we want them to do: learn the basic language structures used by people who are writing about a common topic in a given discipline.”

WAC Suggestions: In light of increased use of technology in the classroom, this article provides useful insight into some strategies that do not work as well. These findings suggest that plagiarism should not be the enemy as students learn to emulate the voice of the author in the search for their own voice. For further reading on plagiarism and ways to explore the concept with students beyond a review of the strict penalties issued by the university, please see the CSI WAC/WID Newsletter November 2010 on the CSI WAC website at <http://www.csi.cuny.edu/fs/newsletters.html>.

MacKnight, Carole

Teaching Critical Thinking through Online Discussions

In *Educause Quarterly*. No. 4, 2000.

Findings: The article offers tools and strategies for incorporating critical thinking skill development in the online classroom. MacKnight emphasizes collaborative learning, reflection, peer editing, and monitored online discussions. The author suggests different formats for collaborative learning in an online setting which include: small group discussions, buzz groups (two to three students who lead discussions for a short period of time), case discussions (either real or simulated) of complex problems, debate teams, and jig saw groups (small groups work on part of issue and then present to the group). MacKnight emphasizes the importance of modeling and monitoring the online discussions. Instructors can demonstrate and model thinking strategies through the forms of questions asked. By modeling different analytical approaches to a topic, the instructor then makes the student responsible for engaging with the material in a similar fashion. These exercises should be designed to increase the level responsibility of the student over the course of the semester. In short, modeling the questions, moderating the discussions, probing students to be more reflective in their analysis, and task structuring should be elements of the online course design in order to maximize critical thinking skill development.

WAC Suggestions: A large part of this discussion boils down to the engagement of the professor with the students in the online classroom. Many of the exercises could also be useful in a traditional classroom setting. Again many of the probing questions could be utilized to guide low stakes writing exercises.

Muirhead MiN, Brent

Integrating Critical Thinking into Online Classes

In *USDLA (U.S. Distance Learning Association) Journal*, Vol. 16, No. 11

http://www.usdla.org/html/journal/NOV02_Issue/article03.html

Findings: Critical thinking should be viewed as a product and a process that is both psychological and philosophical. Distance learning has both affective and psychological dimensions. The challenge faced by many educators is that the form of education is necessarily text-driven. Many courses are designed around handouts and teacher designed lecture notes. As such “the use of language becomes a focal point for teachers and students because the entire communication process is closely linked to thinking.” In the online setting writing becomes the primary form of interaction and makes language the tool for thinking, processing, and exploring. Class structure and the online teaching style need to foster creativity, reflective thinking and self-directed learning. Students should be able to ask questions and take intellectual risks. Teachers need to be actively engaged in the online discussions and provide guidance to keep the dialogue focused.

WAC suggestions: In short moderating the online class is critical. Providing weekly or even bi-weekly deadlines for discussion board submission and scheduling dedicated times (two to three times a week) in which to review and respond to the commentaries will help foster a sense of an online community. One strategy emphasized by WAC is scaffolding assignments, in which the students can revise and rework their writing project throughout the semester. Not only should writing assignments allow for scaffolding, the kinds of questions and problematic posed should also build in increasing complexity. (See the CSI-WAC OpenCUNY page for further reading on how to incorporate technology across the disciplines: <http://opencuny.org/csiwac/>, note you will have to log in using your CUNY email address.)

Find ways to incorporate writing exercises to help engage and capitalize on the text driven format of the online classroom. Use a variety of low stakes to high stakes exercises such as: creating opportunities for peer editing in discussion board groups, student designed self-editing checklists (that provide helpful tips for common errors in writing), short response papers to reading assignments or video clips and mock clinical assessments. Higher stakes assignments could ask students to scaffold a research paper over the course of the semester which can include: making lists of potential topics, finding and citing (according to APA or MLA style) 2-3 primary sources, drafting a research proposal, a section of the paper, an outline, and thesis statements that all contribute to the final grade. Providing students with a paper which successfully meets your criteria of a good paper is also useful.

Richards, Kerry Jo

Developing Critical Thinking Dispositions in Online Courses

Blackboard podcast @ <http://connections.blackboard.com/posts/8263af1c1c>

Findings: This webinar on critical thinking sought to define critical thinking through examining the work of various authors. In sum it can be defined as the ability and disposition to: synthesize, make connections, form links between concepts and ideas, purposeful and regulatory judgment, to be habitually inquisitive, trustful of reason, open-minded, fair minded in evaluation of judgment, have the capacity for orderly and complex thinking, and be diligent in seeking information, to name a few. However beyond ability, the disposition to think critically is vital. How does a teacher go about teaching/ fostering the environment for open-mindedness, whole heartedness, or rather habits of the mind, defined as sustained intellectual curiosity, truth seeking, analyticity, systematicity (inclination to be organized), and maturity? Critical thinking can be challenging to teach as belief preservation can be a sticking point. Creating a constructivist classroom is part of the answer – as it is the most favorable setting for the development of critical thinking skills (Brookfield, 1987; Quitadamo, 2001; Paul & Elder, 2005). These authors identified four elements of a constructivist environment as: 1. Learning communities, 2. Collaborative learning, 3. Authentic tasks, 4. Reflection and dialogue (Mayes, 2001)

Two of the main solutions proposed in this webinar are CONCEPT MAPPING (must challenge development of new competencies) and ARGUMENT MAPPING (allows students to see reasoning and better follow critical thinking procedures) – in short a visual approach to argument building.

An exercise would look like the following:

Define the argument – a set of one or more reasons or objections bearing upon some claim. Arguments have a number of key components: a position is the main point under consideration. It can also be called contention, the conclusion, or the issue. In this exercise we represent a position with a white box. A reason provides evidence that another claim is true. Reasons go in green boxes. An objection is the but.... However is in yellow.

Dogs are great animals - white box

Because dogs are useful (a reason) – green box

But dogs are smelly (an objection) – red box

Washing dogs stops them from being smelly (a rebuttal) – yellow box



The teacher can provide a list of boxes and students need to reconstruct the argument by identifying the part that they represent. A quick exercise would be to have them list the following in the appropriate boxes:

- **the body needs some sugar to be healthy,**
- **too much sugar causes diabetes,**
- **not all chocolate has cocoa,**
- **chocolate is good for your health,**
- **chocolate contains sugar which is not good for your health,**
- **cocoa contains flavonoids which protect the heart,**
- **chocolate contains cocoa which is good for your heart**

WAC Suggestions: This exercise is similar to concept mapping but helps students to better deconstruct a challenging reading and also use as a tool for their own writing. It would be useful to complement this exercise (using key concepts in your own courses) with a review of how to better organize a paper as per the requirements in the course. It is important to stress that not all models look the same. As part of this exercise: students should post their models and discuss why they are organized in that specific way. Reflection and dialogue within groups are key to this process.

Conclusion

There is a vast body of literature on strategies to foster engagement with course material in the online classroom, many of which contend that consistent, frequent, and moderated dialogue is critical in the learning process. Because of the format, the pedagogical challenges create the opportunity to think about elements of critical thinking skill development in a more overt way. Critical thinking skills and dispositions can be encouraged through the use of various collaborative learning exercises, frequent and

moderated discussions (with guided questions), and peer editing exercises. The previous readings were selected to outline the parameters in which the issue is being discussed. Web-based learning platforms, discussion boards, and blogs utilize writing as a primary means of communication which aligns with the WAC philosophy quite well. The following websites and readings (of which there are many more) may also be useful resources for further suggestions and also as a resource for students.

Web Resources and further reading

Purdue OWL: <http://owl.english.purdue.edu/>

Toronto Writing Center Website: <http://www.writing.utoronto.ca/faculty>

Blogs@Baruch: <http://blsciblogs.baruch.cuny.edu>

Communities of Inquiry: <http://communitiesofinquiry.com/>

Electronic Communication across the Curriculum (ECAC): Ten tips for Generating Engaged Online Discussions <http://wordsworth2.net/activelearning/ecacdiscustips.htm>

A very interesting discussion on the merits of online classrooms can be found at:

<http://chronicle.com/innovations/the-strengths-of-online-learning/29849>

Brookfield, S.D. (1987) *Developing Critical Thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco: Jossey-Bass

Facione, P.A. (1998) *Critical Thinking: What it is and why it counts*.