Best Practices: Teaching Students Our Own Approaches to Critical Thinking

We can teach students essential critical thinking skills by teaching our own approaches to writing.

**Identifying a problem and setting research questions.** Good scholarship is problem based. We pose questions to solve problems. An effective course assignment poses problems, too, establishing a set of questions for students to answer. Or we can provide examples and then tell students to turn in a problem statement and a set of questions of their own.

**Reader response.** We respond critically to reading material—writing marginal comments about insufficiently examined assumptions, inadequately tested theories, or overlooked sources. Students can learn from seeing how we read. They can practice (and compare) their written responses to sample material you provide them. Then they can transfer those practices to sources they find on their own.

**Frequent informal writing.** We have a large repertoire of informal writing skills geared toward sharpening our critical thought—e.g., note-taking, “translating” or paraphrasing concepts, summarizing discussions, refocusing, identifying key points, making observations and describing, seeking comparisons, detecting possible trends or patterns in raw data, raising questions, expressing confusion, speculating on connections among ideas. We can get students to develop their own informal writing skills by stopping at intervals in a lecture or asking students to give us “entrance” or “exit” cards, requiring them momentarily to pause and think about course content.

**Reflection.** At important junctures in our scholarly writing processes, we reflect—e.g., we hit an impasse, sense new insights and connections, find information that redirects our thinking, or simply need to figure out what we’ve learned. We may use a journal, a log, or some other format. We can make our own reflection techniques transparent to students and give them similar opportunities. In some classes, assigning occasional reflective writing may be the only major activity needed to see how students are learning course content.

**Linked writing activities.** Our scholarly writing incorporates all of the foregoing critical thinking activities—and we do these activities at different times for different purposes (mostly because it keeps us writing). These activities link up to each other in a process whose logic is rarely linear. Especially when writing a longer project, students, too, need linked writing activities that help them envision and shape the larger whole. We know writing isn’t a simple matter of composing a thesis, an outline, and a finished project. It may be more productive to sketch a review of sources before an introduction, or rough out a discussion of findings before describing a methodology. We have a better sense of when is the most productive time to link different writing activities together for students. They can also turn in parts of a longer project at various times to cut down on our reading time later. This approach helps prevent plagiarism.

**Peer critique.** Often, we don’t wait to submit a manuscript to an editor for feedback. We correspond with a colleague, discuss a project with a co-writer, post ideas on a professional listserv, or ask someone close to us to read and see if a draft makes sense. We can provide similar experiences for our students by showing them a model of what a project should look like and then tell them to exchange drafts with peers who will provide response. We should provide peer critiquers with a set of criteria or a rubric so they can let classmates know if they’re meeting assignment guidelines.

**Drafting/Revision.** Editors return our manuscripts with instructions to revise and resubmit. Why not show students a portion of a draft we’ve revised, based on an editor’s feedback? Students need the same kind of experience to improve as critical thinkers. We or a Writing Center tutor can tell them where their writing confuses us, or where they should provide examples, or where they leave questions unanswered. Giving revision-focused feedback lets students know that the standards for our courses are high, but we’re giving them a chance to come up to the mark. It’s the same way that editors deal with us!
Critical Thinking and Student Learning Outcomes in Writing

**State expectations.** NIU faculty are receiving more state pressure to focus on programmatic and departmental achievement of student learning outcomes. Writing is one significant area in which we can measure such outcomes, particularly in terms of critical thinking. The problem is, how do we go about demonstrating that we all participate in the cross-disciplinary development of critical thinking in writing?

**Foundations.** The Outcomes Statement adopted by the National Council of Writing Program Administrators provides guidelines for achieving critical thinking, writing, and reading in First-Year Composition programs across the nation (see http://wacouncil.org/positions/outcomes.html). As the Outcomes Statement puts it, students completing First-Year Composition should:

- Use writing and reading for inquiry, learning, thinking, and communicating
- Understand a writing assignment as a series of tasks, including finding, evaluating, analyzing, and synthesizing appropriate sources
- Integrate their own ideas with those of others
- Understand relationships among language, knowledge, and power

Currently, First-Year Composition at NIU requires students to produce electronic portfolios that contain personal and general research essays on an array of contemporary topics that show these features.

**Developing disciplinary skills.** The Outcomes Statement also suggests how faculty across the disciplines can build on those outcomes. The Outcomes Statement urges faculty across the curriculum to build on these outcomes by seeing that students complete courses, able to:

- Use writing as a critical thinking method in their fields
- Demonstrate interactions among critical thinking, critical reading, and writing in their fields
- Identify relationships among language, knowledge, and power in their fields

In practice, these criteria break down to: (1) having students write frequently about problems and questions in the content area; (2) familiarizing students with what makes writing effective in different disciplines; (3) getting students to grasp—even critique—what conventions the readers in our discipline and related professions expect.

**Defining specifics.** Faculty know best how to define specific disciplinary outcomes. For example, the NIU chemistry department sets clear expectations about writing an effective lab report (see http://www.engl.niu.edu/wac/, click “Archives” link, click “L” link):

1. **Cover page**—Student name, title of experiment, experiment number, date(s) performed and submitted, identification number of unknown, and experimental unknown concentration (with units).

2. **Introduction**—Provide statement of problem or experiment (parameter, method, principle of method)

3. **Experiment**—Reference procedure, list and provide treatment of data (graphs, calculations, etc.); data should be clear to a knowledgeable reader who has not read experimental procedure.

4. **Results and discussion**—Report findings. Provide interpretation of results, e.g., comparisons with literature values or expected results; factors relating to accuracy and precision; sources of error; unusual aspects and possible effects; limitations of general technique; ideas for further work.

5. **Conclusion**—State final determination(s) reached from results and discussion. Include no new material.

6. **Appendix**—Provide answers to instructor’s questions.

From looking at this lab report format, even an outsider to the discipline can grasp what one important type of critical thinking skill looks like, and how one kind of disciplinary knowledge in chemistry is made.

**The challenge.** How clearly and fully do our departments and programs define student learning outcomes? How explicitly do our class assignments and formatting guidelines detail how students can...

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**Writing at NIU: How Do the Disciplines at NIU Teach Critical Thinking?**

The WAC Program seeks data for a website project called “Writing at NIU.” The project seeks to post information that will clarify how NIU programs and departments define critical thinking in written work.

Although national standards and guidelines often exist, as in the Outcomes Statement above, NIU academic units (and faculty) prefer to set their own. Why? Each university, each department, each program thinks globally but acts locally to establish critical thinking outcomes. Washington State University’s “Critical Thinking Project” provides an excellent example of how such a resource has aided instruction in critical thinking and writing in the programs it profiles (http://wsuctproject.cftl.wsu.edu). So does Marquette University’s “Writing in the Arts and Sciences” site (http://academic.mu.edu/aswriting).

What kind of information might get placed on the “Writing at NIU” website? Take the School of Nursing as an example. The SON has established:

- A three-level set of programmatic nursing objectives
- A six-criteria rubric for assessing undergraduate programmatic outcomes in a writing portfolio
- A “Top 10 Questions” handout that explains to students why the program requires them to assemble the portfolio
- Guidelines for a reflective letter that shows students how to go about collecting and explaining what they have learned from writing the papers they submit to the SON portfolio
- Sample assignments that demonstrate the kinds of critical thinking the program aims to teach
- A Power Point presentation on APA documentation

Putting such information together in one place demonstrates what role writing plays in critical thinking and shows how a program coheres, mapping the trail from objectives to outcomes.