

EFFECTIVE WRITING ASSIGNMENTS

Scaffolding Formal Assignments

Just as a construction worker on the outside of a building climbs the scaffolding one floor at a time, students need to climb intellectual scaffolds one at a time. Often the best assignments challenge students to move from one cognitively difficult phase to the next, more challenging phase, as illustrated in the steps along Bloom’s Taxonomy below, and Perry’s Model of Intellectual Development. The success of assignments often depends on how well suited and how responsive they are to the content and requirements of the course as well as the ability levels of the students.

Why scaffold assignments?

- Breaks up the cognitive task into smaller, more manageable tasks
- Allows for more intervention when it’s useful
- Fosters global revision—revision in one’s understanding of the subject matter
- Shows more clearly the relationship between in-class and out-of-class work

Bloom's Taxonomy and Perry’s Model of Intellectual Development

Bloom's Taxonomy

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
repeat list name cite, relate tell define, etc.	translate report describe retell explain discuss summarize recognize, etc.	apply show solve simulate, operate ex periment calc ulate, etc.	interpret test, examine differentiate distinguish in vestigate, etc.	predict plan hypothes ize incorporate invent propose formulate, etc.	judge assess revis e measure reco mmend criticize eval uate, determine, etc.

Perry's Model of Intellectual Development

This is a simplified version of William Perry's nine-stage model of intellectual and ethical development. He studied the development of students during their undergraduate careers. Perry called it a progression from "thinking to metathinking," underscoring the importance of reflection and the ability to meaningfully critique one's own ideas.

Dualistic Thinking: "All things are right or wrong, black or white."
Relativistic Thinking: "Well, everyone has his or her own opinion and could be equally right."

Principled Commitment: "Some ideas are more right than others. One has to look carefully at the claim, supporting evidence, and other factors."

An understanding of Perry's phases would be particularly useful for those who have students investigate open-ended dilemmas within their professions. For more on Perry, see William G. Perry, *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. New York: Holt, Rinehart, and Winston, 1970.

How to create scaffold assignments

Scaffold assignments break up cognitive tasks into smaller, more manageable tasks and allows for more intervention when it's useful. Scaffold assignments foster global revision and clearly show relationships between in-class and out-of-class work. The best way to plan a sequence is to work backwards from the assignment itself. The assignment should:

1. List the cognitive skills required to complete an assignment.
2. List what content knowledge students must understand before they can say something of their own about it or apply that knowledge to a new situation.
3. Work smaller assignments into the course that will prepare students to think in the ways the assignment requires and that reinforces the materials and content they need to complete an assignment.

Ways to Accomplish This:

4. Informal writing assignments sequenced throughout the semester or part of the semester
5. Prewriting activities Write-to-Learn Activities
6. Staging the assignment itself into sub-topics or "chunks" that will eventually be put together
7. A combination of 1-3

Scaffolding can also occur when writers try to communicate to more demanding types of audiences. A scaffolding sequence starts with what students know and don't know about the subject (I-search) and moves to communicating to the peer group (others), and then to broader communities.

Audience	Type of Assignment	Content/Goal
Self	Purely Expressive (journals)	Discovery of self; no external info
Close friend/peer group	Expressive-Transactional	Communication of self; close peer group no external info
Community of which they are a member	Community	Writing to known audiences/external info tied to experience
Teacher/educated peers	Expressive/Community—Academic	Transition to academic writing; personal info in an academic form
Teacher/ educated peers	Academic (Segmented)	Transitional; one peers cognitive/genre consideration; restricted outside sources
Completely unknown or generalized audience	Workplace	Personal and/or external or generalized audience info depending on genre
Teacher/ educated peers	Academic (Multiple)	Multiple skills in single peers paper with multiple sources

Types of Scaffolding

The type of sequencing involved in the following samples is called "Scaffolding" because it facilitates the climb from one complex phase to the next, slightly more complex phase of a project.

Writing Skills:

Practice skills or strategies which usually don't make up a paper in and of themselves (e.g., outlining the background to a problem, defining a position) but are key implicit or explicit components of the final paper.

Context-Based:

Journal entries focused on exploring the content of the assignment.

Rhetorical Skills:

Practice in the aspects of the rhetorical situation and how changing the situation changes writing (e.g. audience analysis or adaptation exercises).

Text-Based:

Closer to prewriting; journal entries which help the reader interact with a text more incisively, providing ideas for the reader turned-writer.

Other Considerations:

When designing a sequence of assignments, several other facts or need to be considered. They are:, including the roles of word count, class size, integration, feedback, and revision.

Word Count - While some Writing Across the Curriculum programs around the country include guidelines for word minimums for writing-intensive courses (e.g., 5,000 words, or 20 pages @ 250 words/page), the Mines WAC Committee thinks word count is only one of many factors that should be considered in WI course design, and one that should not be considered in isolation.

Class Size - Class size should be considered in the WI course design, particularly as it relates to instructor work load; if an instructor reads 10 pages of student writing per course, a class size of 20 means a 200-page reading load.

Integration, Feedback, and Revision - If the writing is fully integrated (rather than tacked on), it is overtly linked to specific course goals. Students should be able to have diverse sources of feedback, including peers, Writing Center tutors, and the instructor.

Revising—particularly global revision in the writer’s understanding of his or her audience, purpose, and focus—should be encouraged in the sequence of assignments.

Sample Scaffolding Assignments

These samples are presented as possible approaches to having writing complement—rather than hinder—course goals. In doing so, it is important to recognize that the assignments here involve pedagogical approaches that some may initially find unfamiliar, even inapplicable.

Sample 1: Senior-level Geophysics Course

A professor is designing a writing-intensive component for a senior-level Geophysics course with a class size that ranges from 6-12. The professor decides to work backwards chronologically, starting from what he or she wants students to know and be able to do with that knowledge at the end of the semester. He or she lists the overall course goals in the following manner:

- An understanding of several key course concepts and processes
- The ability to apply several of those concepts and processes to the investigation of an open-ended dilemma in the field of Geophysics
- The ability to make significant revisions in one’s ideas based on feedback, the ability to give and take peer review comments, and the ability to use some common writing conventions of our field

The professor decides to scaffold the assignments in the following manner:

Problem Definition - Since a problem well defined is half solved, students will identify the nature, components, and scope of a specific problem in this memo. The professor gives feedback but no grade; the ideas from this section will be woven into the introduction and background in the final report.

Due: Week 5

Length: 2 pages

Audience Analysis - Students need to identify the parties who have a stake in a solution, such as those in the U.S. and abroad, relevant business sectors, appropriate academic or industry players and journals, academic departments, etc. Students should explain why these parties have something to lose and/or gain in finding a solution.

Due: Week 8

Length: 2 pages

Solutions Report - This report summarizes the current solutions, who is proposing them, and why those groups are supporting them. It will evaluate the relative pros and cons of each solution as objectively as possible in light of the diverse audiences/interested parties. We will look at a sample essay, discuss writing conventions specific to this discipline, and do a peer review session in class. Feedback but no grade.

Due: Week 11

Length: 4 pages

Final Problem-Solving Report - This report will give a brief synopsis of the problem and various solutions, and a solution(s) recommendation by the writer with justification. Use report format common to Geophysics; see sample reports. Graded.

Due Week 14

Length: 7-9 pages

Sample 2: Junior-Level Lecture/Lab Metallurgy Course

Course Goals: The 20-24 students are expected to improve their ability to convey what they learn in lab experiments; these experiments encourage them to apply key course concepts. Since students should also improve their ability to write a concise, precise lab report over the course of the semester, they will receive more extensive feedback on early reports so they can apply it to later reports. After lab reports #1 and #2, the instructor will distribute copies of the best lab report, asking students to list the features of the sample report that make it effective as well as list any potential areas for improvement. Students will then reevaluate their own reports.