

Assignment Scaffolding

by Allyson Skene and Sarah Fedko

WHAT IS SCAFFOLDING? – It is structuring assignments and course material in a systematic way to support your learning objectives and make the goals and process transparent to students.

PART ONE – Scaffold and Assignment Design

A. PROCESS SCAFFOLDING

One effective method of scaffolding is to take a complex assignment, such as a literature review, lab report, or research essay and break it into smaller components. Providing formative feedback on the earlier assignments will help students master each step in the process before proceeding further. This type of scaffolding helps students get started on complex assignments early and ensures that they are on track throughout.

Possible steps in a complex assignment	Smaller assignments to help students master each step
Topic Selection	<ul style="list-style-type: none"> ■ Free-writing ■ Proposal ■ Working Thesis Statement
Research	<ul style="list-style-type: none"> ■ Annotated Bibliography ■ Read Map
Evaluation of Sources	<ul style="list-style-type: none"> ■ Critical Review ■ Literature Review
Draft	<ul style="list-style-type: none"> ■ Outline ■ First Draft
Revision	<ul style="list-style-type: none"> ■ Peer Review ■ Meta-Statement

B. CRITICAL THINKING SCAFFOLDING

Another effective method is to give different types of assignments that function as scaffolding to support students as they develop their critical thinking skills. Begin with assignments that demand lower order critical thinking skills (abstracts, summaries or descriptions, quizzes) and build towards more complex assignments (case analysis, business plan, lab report). This type of scaffolding can be difficult to implement in large courses because of the marking involved, but use of writing-to-learn assignments can help.

Assignments that support critical thinking goals in large classes

Possible Objective	Ideas for large classes	Advantages
Remember a term or definition	<ul style="list-style-type: none"> ■ iClicker questions ■ self-test quiz 	<ul style="list-style-type: none"> ■ Quick and can be used to help break up the lecture
Improve comprehension of a complex concept	<ul style="list-style-type: none"> ■ One-minute paper ■ Reflection paper ■ Statement of confusion 	<ul style="list-style-type: none"> ■ Can be given in-class or as homework ■ Can be unmarked or given pass/fail grades ■ Could be submitted simply to help you see where students are having trouble
Synthesize course concepts throughout the term	<ul style="list-style-type: none"> ■ Learning journal 	<ul style="list-style-type: none"> ■ Does not require feedback ■ Can be submitted periodically and given pass/fail grades
Develop more sophisticated research and writing assignments	<ul style="list-style-type: none"> ■ Peer-review of drafts 	<ul style="list-style-type: none"> ■ Helps students learn how to evaluate assignments, but the onus is on students, not the instructor or TA.

ASSIGNMENT GLOSSARY

Memory and Comprehension Checks - Quick ways to ensure students understand the basics before attempting to complete more complex assignments.

- a. *iClicker questions*: Great for in-class mini-quizzes. The technology can be used to give grades for either participation or for getting the correct answer, but this should be done with caution as there are possibilities of technical difficulties or misuse. Also, not all students have iClickers, so they might be required to buy one for the course.
- b. *Self-Test quizzes*: A low-tech version of the above that is much harder to track and grade, but much easier to administer. Simply ask students a series of questions and have them write answers in their notes. Then go over the answers with them, so they can check their own work.

Writing-to-Learn Assignments - These are informal, easy to administer and very useful for helping students process course material.

- a. *Learning journal*: Encourages students to reflect on their learning process throughout the term. Students write regular entries in response to clear prompts related to course material or their understanding of it. Not only does a learning journal help students learn to articulate their thoughts and questions, it helps them to see the progress they've made and notice patterns in the course material.
- b. *One-minute paper*: A very short essay, usually written in-class without time for planning or revision. Key is to give students a clear question prompt and one minute to jot their answers.
- c. *Read Map*: A concept map that helps students synthesize their research or course readings. Encourage students to draw and label the connections between their sources.
- d. *Reflection paper*: A short writing assignment that can either be written in class or at home. Reflection papers are most useful for getting students to step back from the material to think about their own understanding of it (and strategies for moving to the next level) or patterns within it (developing a richer understanding). It is important to give students a clear prompt to help them focus.
- e. *Statement of confusion*: A version of the one-minute paper where students are asked to write for a minute or two on the concepts or material that most confuses them. If collected, these statements can be very helpful for seeing whether and where students are getting lost.

Revision Assignments - Revising or re-thinking their writing helps students improve their critical thinking skills and course mastery. The following assignment types are effective approaches for large classes.

- a. *Meta-statement*: Prompt students to write a paragraph reflecting on how they would improve their paper if they had the time or opportunity. This assignment can be effective whether students write it before handing in their papers or after they have received feedback.
- b. *Peer review*: Peer review can be done in-class, outside of class, or through technology such as Blackboard or PeerScholar. Students will need to be coached on how to give effective feedback (rubrics and models are very helpful for this), and to ensure that all students participate, the exchange of papers should be organized by the instructor or TA.

PART TWO – Strategies for Successful Scaffolding

1. Define clear learning objectives. Avoid vague phrases such as “mastery of course content” and strive for precise statements of what students will be able to do, know, and value.
2. Think about what assignments you would like students to complete and how the assignments will help students meet those learning objectives. *E.g.* A midterm or short reflection paper might aim to make students demonstrate their ability to explain specific core concepts or solve particular types of problems.
3. Organize assignments in a way that culminates in your learning objectives. *E.g.* If aiming for a comprehensive research paper that shows students are capable of producing professional work appropriate to the discipline, then sequence the assignment over the course of the term. If aiming to have students demonstrate facility with course content, then use different types of assignments to gradually increase from simple memorization to the ability to evaluate and problem solve.
4. Be very clear with TAs and students about both the purpose of the assignment. This will help students transfer these skills to other courses and advance through their degree in a way that is deliberate, and not simply accidental.
5. Be very clear with students, and with TAs, about your expectations. A grading rubric communicates expectations to all involved and is a great way of keeping both students and graders on the same track.
6. Time assignments and explanations carefully so that students will be able to see the close connection between your lectures and the skills and techniques they will need to complete those assignments.
7. Be creative. There are many different ways to scaffold assignments that can help engage students and improve their learning outcomes.

Time-saving Tips

1. Take advantage of technology. Blackboard can help you manage assignments; the library feeds will help your students find the appropriate resources.
2. If students are submitting drafts, give most of your feedback early on, so students can benefit from it, and produce better assignments. Then, for final drafts, simply assign grades.
3. Give only pass/fail grades for the smaller, less consequential steps. This can be done very quickly through Blackboard and will leave time for marking the larger pieces in more depth.
4. Focus feedback on your specific learning objectives. For example, if your goal is to develop students’ skills at critical thinking and argumentation, don’t waste time correcting grammar and sentence structure but focus on content and how well the student is meeting your expectations. Rubrics can also be very useful for making grading more efficient.
5. Stagger assignments. Give students a choice of which assignments they can do, with different deadlines. This will stagger marking duties over the semester.

6. Build learning communities or peer groups. Having students give feedback to their peers throughout the process has been shown to improve student learning and transference of skills. Caution: While peer evaluation is a very effective strategy, having any of the marks dependent on that evaluation can be problematic.

Troubleshooting Scaffolding

Concern	Some responses
“Scaffolding takes too much time.”	<ul style="list-style-type: none"> • Yes, it takes time in design, but it will save time and most importantly frustration when grading, particularly large final assignments. • Use technology—PeerScholar, iWRITE, Blackboard • Build learning communities in the class so peers can offer one another feedback
“My students don’t like a lot of small assignments. They complain it’s too much work.”	<ul style="list-style-type: none"> • Be explicit about process and value of working step by step towards goals; explain that it isn't really MORE work, just organized differently • Students report that scaffolding reduces stress • Emphasize connections to course learning objectives
“It adds too much to my marking load. Neither I nor my TAs have time!”	<ul style="list-style-type: none"> • Not everything has to be marked, or marked individually: give group feedback • Give pass/fail grades for less consequential assignments. • Stagger assignments • Give early feedback • Have students review their peers papers • Focus feedback on learning objectives • Develop grading rubrics to facilitate marking
“I tried grading and giving feedback on early drafts and students just made the specific changes I suggested and expected better marks.”	<ul style="list-style-type: none"> • Give pass/fail grades for early drafts—or take off grades if students don’t submit a draft. • Include global recommendations for improvements as well as specific ones • Make clear criteria for actually getting a better mark (i.e. a revision rubric) • Define revision and discuss process and expectations explicitly—show examples of drafts of your own writing • Make final step worth the bulk of the marks
“I like the idea of peer review but I’m afraid that students won’t take it seriously.”	<ul style="list-style-type: none"> • Do it in class and introduce by discussing the professional peer review process • Ask student reviewers to answer specific questions on a handout (broad Qs around thesis, argument, and organization tend to be better than grammar) and give you a copy of this feedback. You can then mark the feedback—either Pass/Fail or • For larger classes use PeerScholar
“Scaffolding makes it too easy and will alienate the brighter students.”	<ul style="list-style-type: none"> • Scaffolding does not just break down the process, it supports learning. If every stage has a learning goal, even the brightest students can push themselves further at each stage. • With the structure scaffolding provides, you can make assignments much harder and more interesting, which will challenge and satisfy the best students, while still making it possible for everyone to succeed