

Unit 6
Writing to Learn
And Other Forms of Active Learning

Objectives:

1. Know the characteristics of learning activities.
2. Know how and when to use writing to learn activities.
3. Be familiar with a variety of active learning techniques and resources.
4. Know and apply criteria for effective active learning.
5. Integrate learning activities in your course plan.

The idea that people learn by doing has been part of the conventional wisdom surrounding education for thousands of years, with credit for the idea often given to Aristotle or John Dewey. Experiences like internships, apprenticeships, and a range of other job training programs accentuate the importance of getting in the trenches and learning a craft. Yet, in college classrooms, this wisdom is widely ignored when teachers lecture to passive students.

Active learning is the contemporary label for learning by doing. This unit will offer an overview of a variety of active learning strategies and provide some opportunities for gaining experience with them. In a sense, the phrase, active learning, is redundant; all learning is active. Learning only takes place when there is active processing of information and experience. The simplest definition of active learning is that it takes place when "students do most of the work" (Silberman, 1996, p. ix).

The following are some characteristics of active learning (adapted from Mathie, et al., 1993, p. 185):

- The entire class has the opportunity for active participation.
- Students understand the relevance of the activity to course content or their everyday life.
- The activity is flexible enough to encourage student-initiated learning.
- The activity stimulates learning at higher cognitive levels.
- Feedback to students is planned into the activity, and is given at the time of or soon after the learning experience.

Activity

Design an assignment or activity in your discipline that uses as many of the above active learning characteristics as possible.

Articles, books, and workshops abound that provide advice and examples of how to get students to more actively participate in learning. The small group discussion approach included in the last unit is one important way of doing this. There are many other forms of active learning, both in and outside of the classroom, which can be done individually or in groups (Meyers, 1997).

Planning and managing active learning activities can be time consuming for the instructor. Successful implementation of such activities requires thought and advance preparation. Virginia Mathie and her collaborators (1993) provide the following advice on using active learning experiences.

- Establish rapport. Active learning might be a new experience for some students. It's not what they usually do in their college classes, so they need to feel comfortable with the instructor. This involves creating a "climate of trust" and that helps students get involved. [Fleming \(2003\)](#) provides strategies for establishing rapport with students.
- Stepwise progression. Because these activities may be atypical for many students, begin with exercises that are highly structured and directed by the teacher with clear instructions on what students are to do. This is especially important for first- and second-year students, and for activities that involve self-disclosure.

- Set limits. Instructors must be sensitive to issues of privacy and to individual differences among students. "Students should be given guidelines for nonjudgmental evaluation and feedback for particular exercises" (p. 189). Some of the ground rules for class discussion (Unit 5) would apply here.
 - Consider content. Active learning can be used to accomplish any objective, including the learning of basic facts, but it "works particularly well with complex material that calls for the development, evaluation, and tempered acceptance of several alternative explanations" (p. 190).
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Activity:

- Review your teaching philosophy to see if it contains statements that indicate the relevance of active learning?
 - Review the objectives in your course plan. Identify which of these would benefit from the use of some active learning techniques.
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Writing to Learn

One of the easiest forms of active learning to implement is requiring students to write. We are not talking here about writing papers of various lengths, but primarily about writing to learn. Nodine's (1999) article, "Why not make writing assignments?" captures the essential ideas of this approach.

Expressive writing is written for oneself for the purpose of understanding a concept or topic. Thus, written reflection on material allows writers to clarify their own understanding of it (p. 167).

One recommendation from Nodine is stopping during a lecture to have students write a response to some question using "free writing, that is, writing non-stop, without lifting their pens from the page and without concern for spelling" or grammar. Minute papers discussed in an early unit are an example of this strategy. Short response writing requires students to be more involved in thinking about the question than would be the case without the writing. "Remember, the point is to get thoughts on paper where they can be reviewed and re-examined" (Nodine, 1999, p. 168). Here are two suggestions for using this type writing exercise:

- In classes of 30 or fewer, a writing exercise can serve as a basis for discussion. All students will have expressed an opinion that they can use in the discussion.
- In classes of any size, students can exchange papers with a partner to clarify what they have written, perhaps using guiding questions from the teacher. You did this exercise in the Unit on developing your teaching philosophy.

Activity:

Refer to the class presentation outline you prepared for Unit 4. Indicate the places where you could use a writing to learn activity. Write a plan for what you would do.

Review your plan with a peer.

Are assignments like these a lot of extra work? No, because you do not have to collect, read, or grade these papers. In writing to learn, students do the work to foster learning, and they receive feedback from their peers. Nodine argues that grading the papers changes the purpose of the writing and stifles the writing of authentic ideas. However, Jim likes to collect papers sometimes just to see what students are thinking. This encourages them to take the assignment seriously and it also provides an opportunity to summarize the various ideas that students produce. In a large class you might choose to read a sample of the papers.

Papers. All of us had experiences with the "term paper" when we were college students. Those of us who survived and continued in academic life probably enjoyed writing these papers, and our ability to do them helped us get into graduate school. Now we call them articles and they get you promoted. Most of our teachers gave us some guidelines for selecting a topic for the paper, maybe some help finding material, and a few weeks later we handed in our 10-20 pages. That still may be the model for out-of-class writing assignments, but here we want to consider a wider range of writing assignments and methods to accomplish course objectives.

Short papers (1-2 pages) can be of great value for some objectives. You may want students to think critically about a specific issue or to summarize a position on an issue. This format requires the student to be clear and concise in expressing a view. Short assignments also

work well for peer learning, where students exchange papers and provide feedback to each other. Additional discussion of the writing to learn approach and examples of short writing assignments can be found in [Smit \(2010\)](#).

Nodine stresses the importance of paying at least as much attention to the writing (and thinking) process as you do to the final product. She emphasizes the importance of giving students "the opportunity to experience and understand the process of writing . . . through drafts and revision which are ungraded" (1999, p. 169). This means providing input to individual students as they develop their papers. If learning objectives are important and if papers are the best way to help students achieve these objectives, then the time is well spent. The time may not be as great as you think because your focus is on helping students learn to think and to communicate their thoughts rather than on grammar and spelling. Ideally you would read a paper's first draft without grading it to encourage the student to take risks on future drafts. Short of that, scanning the draft briefly in a student's presence or arranging a peer review session in class are beneficial activities. Providing questions that emphasize the peer readers' description of what they read can increase the value of a peer review session (Nodine, 1999, p. 171).

Activity:

Review the objectives for the course you planned in Unit 3. Would an out-of-class paper help to accomplish any of these objectives? If so, think about the value of a 1-2 page short paper versus a longer paper. Write a draft of this assignment. We will refer to this draft in Unit 7 on grading.

Making writing assignments more relevant to students' daily lives is often advisable. Concepts are best mastered, when the learners find value in the process of applying what they are learning to their personal experiences and lives. When teaching Life-Span Development courses, Jason routinely requires students to take at least two different theories and use these theories to explain how an unidentified loved one has evolved into the person they are today. For example, interview questions might be developed using Vygotsky's sociocultural approach. This theory then serves as the frame of reference by which the student shows "active mastery" of the course material. In essence, the question of whether factual theories can be used or not in the real world is answered. An added bonus is that many students describe having a great deal of fun putting their facts to work in this fashion.

Blogs and wikis which were mentioned in an earlier unit provide excellent tools for short writing assignments and peer-review activities. One of Mary's colleagues regularly uses wikis to facilitate the writing of class notes. Each class session, a different student is assigned the role of class scribe. This student enters his/her notes on the class wiki immediately following the class session. The other students in the class then edit and expand upon the scribe's notes, resulting in a collaborative set of notes. This activity has a side effect of helping weaker students develop note taking skills through observing what other students include in notes. Mary uses wikis for assignments related to course readings. Each student is responsible for summarizing in a wiki entry key points from an assigned article or book chapter which the rest of the students then edit and expand. She often requires students to create blog entries in place of submitting short written papers. Some faculty members use Twitter and ask students to summarize key concepts in at most 140 characters.

Students should be aware of the importance of good writing in whatever career they choose or media they use. You may want to consider making the development of writing skills a specific course objective.

Other Varieties of Active Learning Activities

Often when students are involved in active learning exercises, they are talking loudly, and laughing; that is, they are fully engaged. Can this be learning? As long as the objectives for the activity are clear, there is nothing wrong with using activities that might be construed as fun. Each of the activities we describe can be used to achieve one or more cognitive objectives including the application of principles or the evaluation of ideas. As you consider incorporating various active learning strategies into your teaching, keep in mind your course objectives, and how these activities can help students achieve these objectives. This is particularly true for critical thinking, which is something that must be done actively, not simply read about.

Where can you find suggestions of active learning strategies? There is actually a wealth of resources containing activities and strategies for implementing active learning. You might begin by looking at general sources like *Tools for Teaching* (Davis, 2009). The instructor's manuals that come with most textbooks have activities, which while they might vary considerably in quality, are still worth examining. Professional organizations for academic disciplines frequently provide collections of activities. For example, in psychology, the journal, *Teaching of Psychology (ToP)*, has activities in every issue, many of which have been accumulated in separate volumes that are listed at the end of this Unit. You can access an index to all subjects covered in [ToP](#). Examples of sources for active learning strategies provided by other disciplines include publications such as The [American Society for Engineering Education \(ASEE\) Prism](#), The [Journal of Nursing Education](#), [Journal of Education for Business](#), [The History Teacher](#), [Journal of Social Work Education](#), and [Chemical Engineering Education](#). For example in the latter journal, Felder (1990) provides tips for incorporating active learning into an introductory chemical engineering course. Websites of professional organizations such as

[American Council on Teaching of Foreign Languages](#); and [National Council of Teachers of English](#) are excellent sources of discipline specific resources. In addition there are publications such as [Active Learning in Higher Education Journal](#), [National Teaching and Learning Forum](#), and The [Teaching Professor](#) which regularly contain examples of active learning strategies.

Teachers certainly cannot use a shortage of activities as an excuse to avoid using active learning initiatives. The choices available can be overwhelming. You might begin by asking other teachers what has worked well for them. Miserandino (1999) has developed the following guidelines, which we have modified, to increase the effectiveness of such activities:

- Provide a background and rationale for the activity related to the goals of the course.
- Specify what students will be doing and your expectations for their participation.
- Indicate how the activity will be evaluated and if it will be graded.
- Be sensitive to students' privacy and do not ask them to disclose sensitive personal information.
- Respect individual and cultural differences (e.g., shyness, personal history, gender) in order to avoid embarrassing students.

If you are using an activity for the first time with no one else's experience to guide you, consider using it in a practice session with some friends. Be sure in advance that the materials and equipment work, and that you know how to help students use necessary resources. Anticipate questions and problems. Of course, you cannot anticipate everything, but we have found that even when an activity does not work, you can help students learn something by asking them to analyze the reasons for the unexpected outcome.

Case studies. These are most commonly used in business, law, medicine, and clinical psychology, but can fit in just about any discipline. For example, The [National Center for Case](#)

[Study Teaching in Sciences](#); [The Clearinghouse for Special Education Teaching Cases](#); and [The Clinical Nursing Case Studies](#) site each contain databases of cases for teaching specific disciplines. Dramatic cases present themselves in the news regularly as well as in your own campus setting. You can consult one of the many books on teaching with cases (Ellet, 2007; Barnes, Christensen, & Hanson, 1994) if you are using cases for the first time. A case may become a continuing example in your class. Jim used two cases of road rage during the semester and had students, writing individually or in small groups, to apply concepts from psychoanalytic theory, physiological psychology, social psychology, and other areas.

Projects. Out-of-class work might involve learning activities in addition to writing about things the student has read (i.e., library research). Projects involve experiences that become the basis for application, analysis, synthesis, and evaluation of course content. These may be individual or group experiences.

Some projects are quite simple, like having students practice "random acts of kindness," that is help someone without being asked, then write about the reactions. Other projects are more complex, like choosing some behavior to modify and applying the principles of reinforcement. Data collection projects may be done individually or in groups. Once again, instructor's manuals that come with textbooks and other sources contain many suggestions.

Other projects are grouped under the general heading of "independent studies," and may allow students to obtain course credit for research they conduct or help a professor conduct. We believe that these types of experiences represent particularly powerful mediums for promoting active learning. Jason requires students who work with him on his research to meet on a weekly basis to discuss general issues related to his field of study. During these weekly discussions, students bring perspectives and ideas based on what they have been reading and writing about in

relation to their own individual projects. They learn quite quickly that they have an idea to add to broad-based issues in our field of study. Original and lively banter is easily maintained and teachers gain fresh perspectives on their topic of choice.

Games. "When somebody says, 'I knew it all along.'" "What is hindsight bias?" This is the Jeopardy television game show format for quizzing students. It, and other games, can become active learning in two ways; first, by asking all students to create items for the game, and second, by involving all students in playing the game in class.

Another approach is to have students design a game. Creating an adaption of an existing game can be quite challenging. A group of Saint Louis University graduate students adapted *Pictionary* for class use, and Jim used it effectively in his introductory course. (Try drawing a picture of chemical bonding or "The Merchant of Venice.") There are few limits to teachers' and students' creativity in designing active learning experiences.

We have included a variety of examples of active learning strategies, but there are excellent resources that contain many additional examples and strategies. In particular, we recommend :

Active learning: Creating excitement in the classroom (Bonwell & Eison, 1991);

Student engagement techniques: A handbook for college faculty (Barkley, 2009); and

What the best college teachers do (Bain, 2004).

Activity

Using either the course plan you developed in Unit 3 or the syllabus for a course you have already taught and find at least two places where you could use one or more

active learning activities. Write a brief draft explaining how you would integrate these activities in your course.

Conclusion

Aristotle said, “For the things we have to learn before we can do them, we learn by doing them.” Our education system might have misplaced that idea for many years, but now it is becoming strongly associated with effective teaching. There are many ways to encourage students to learn actively, and we have only scratched the surface here. It is the job of creative teachers to develop their own active learning approaches that are uniquely based on their personal teaching philosophy.

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