

Getting Students to get More out of the Textbook:

Four strategies that will increase your job satisfaction
and confirm your professorial brilliance!

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The professor cannot assume that most students will or even can read the text profitably in preparation for a lecture, discussion, or exam. Some students can read it profitably, and they will do so; some can but they won't do so; and some are so little practiced at study reading that they haven't a clue how to do it even if they wanted to. So, abandon the textbook? Many professors have done that and found "innovative" ways to cover the material/content of the course, a pragmatic solution that only contributes further to the overall cultural decline in literacy. But many professors, you included, find that the textbook is a valuable tool in the accomplishment of the learning objectives for their course. Moreover, in many cases there is no better way to learn certain material than by study reading. But, if students don't see a need to read the text, and don't really know how to, you need to help them in both those areas by *creating the need*, and *showing them how*.

But first you should decide why, in general, you want the students to read the textbook (rather than learn the content by some other means). The reason(s) why you think reading the textbook is important will inform the manner in which you will engage students with the text.

Is the text the *primary* source of content for the course, supplemented by lecture/discussion? Or is the text a *supplement* to another primary means of learning the content for the course (such as lecture/discussion, hands-on, or performance)?

If the text is the centerpiece of your course, then both homework and significant class time need to be devoted to carefully crafted, meaningful activities that engage students with the text in a way that can't be ignored or glossed over. Students need to be held accountable and demonstrate that they have read –and understood-- the text. And that

can be done with a variety of structured assignments that guide and focus students on the key concepts you want learned.

If the text is supplemental, and not primary, you will still need to give clear guidance as to what in the book is important and why, although the amount of class time devoted to the text will be less. Expecting the students to read all of it—or even any of it—because you say it is important is unrealistic. Many students tend not to view reading as an important or necessary means of learning, unless it is explicitly required for a specific course. But often, they also tend not to have the skills necessary to plan out their reading assignments in productive ways. That is, they don't know how to read a textbook very well, despite the many aids often provided by modern textbooks.

The following strategies are designed to “force” students to read the text (*create the need*), and to do so in an active (*show them how*) rather than a passive way. These strategies require some planning and preparation on the part of the instructor, but once done they are then ready to use again next semester.

These activities are proposed with the following principles in mind:

- If the text is worth reading, then it is worth taking the time to make sure it is read well.
- The more times the students actively engage with the same material, the more likely they are to learn it at all, the better they will learn it, and the longer they'll remember it.
- Tests and quizzes, whenever possible, should themselves be learning activities, not just evaluative activities.
- Cooperative group activities can increase learning and should be done in such a way as to involve all students as equally as possible, not allowing the slackers to ride on the coattails of the do-ers.
- Students are to understand that they are responsible for their own and each other's learning.
- Shifting the workload from the professor to the students fosters greater learning and healthier, happier professors!

1. Strategy One: conduct a PRE-reading activity with the students

- a. First, you the professor have a pre-reading activity to do! Ask yourself what the important concepts are, what the technical terms are that carry those concepts, and what the reading/thinking skills are that are necessary to learn those concepts. Prioritize the concepts from most essential (everyone must know these) to very important (I hope most will learn these as well) to important but least so (I know only a few students will get these concepts, and if I have enough time I will work these in, but I need to work on the first two levels). Then, ask yourself why you want the students to read the particular selection being assigned. What will you want the students to be able to *do* with the concepts/skills? Then design one or more learning activities that engage the students with the material in order to achieve your objectives. Finally, design an assessment activity to complement not only what they learn, but how they learn it, and use it in such a way that it reinforces learning.
- b. ALWAYS introduce the reading assignment to the students before they are to do it. Tell them why you want them to read it and how what they will learn fits into the immediate and overall course plan. Also, make clear not only the benefits of the reading, but the consequences of failing to read the assignment (inability to successfully proceed to the next skills or concepts, loss of points on study guide, ineligibility for subsequent group assignment, etc.) Then do one (or more) of the following:
 - i. **Establish prior collective knowledge** of students and predict the learning outcomes: In five minutes or less, review with students the chapter headings, pictures, captions, charts, and any end-of-chapter questions the book itself provides, and ask them to *predict* the major learning outcomes. Ask them to show how what they are about to learn relates to what they have already learned. (You don't necessarily have to correct any gaps in knowledge at this point or even erroneous predictions if you have stimulated their curiosity and built their confidence. One of their reading goals will be to confirm or disconfirm their predictions.)

- ii. Provide a brief pretest of some kind for students to key into their prior knowledge—true/false, multiple choice, matching, fill in the blank. Have students compare notes. (You might give this same quiz again as a post-reading test.)
- iii. Explain to the students what reading skills will be necessary to accomplish the reading effectively. They not only need to know *what* to read for, but *how* to read it.
 - 1. Literal understanding/recall of facts?
 - 2. Inferential understanding of unstated ideas?
 - 3. Ability to understand/ use/explain a process?
 - 4. Critical evaluation of the concepts of the reading (agreement/disagreement; accuracy; importance, etc.)?
 - 5. Relating the concepts to previous readings?
 - 6. Recognition of the author's pattern of organization (process, cause-effect, comparison/contrast, analogy, definition)?

2. Strategy Two: provide a written reading guide

The value of a reading guide should not be minimized. What you put in it will direct and guide the students' reading in precisely the way you want it to be done. A reading guide to accompany a chapter can take many forms. If the textbook has a good set of preview and review questions that meet your needs, use them. Or, use a combination of the textbook questions and your own questions. Require students to type answers to any or all of them and give them credit for doing so on the due date. Your objective here is to give them credit for proving they have study-read the text. If you want to actually correct their answers, go ahead. (Typed responses are easier for you to read, suggest a greater seriousness and importance to the assignment, and cannot be added to/changed in class by slackers who copy from others. Typed responses allow you to assign follow-up group work with the completed guides, to which they can add new responses/corrections by hand, showing you the additional in-class learning that takes place after the initial individual work.)

To prepare a reading guide:

- a. Determine what concepts and vocabulary are important in the reading selection.
- b. Develop a prioritized list of questions at the factual and interpretive/ analytical levels, and a list of the important vocabulary prior to students' reading the assigned chapter. Not all of your questions may end up on the guide. Some you may reserve for follow-up class discussion and group work.
- c. Develop the reading guide to correspond to the order of presentation of concepts in the text, or according to priority of concept importance, or according to the different levels of questions you want them to respond to--whatever makes sense to you given your objectives and the nature of the material.
- d. Require students to **type** answers to the reading guides and bring them to class for credit. Promise to use some of the questions on a quiz. If the guides are available through e-mail or a website (such as BlackBoard), they can be downloaded and filled in with student answers.
 - i. **Variation 1:** Give credit to each student who you visually confirm to have a completed study guide for that reading. When it comes time for a quiz, make sure several quiz questions come from that study guide (as you have orally promised to students). Then move into your day's lesson.
 - ii. **Variation 2:** After giving credit for their completed guides, have students compare their answers in small groups (4-6) to edit/correct their work with one another (now the guide becomes the lesson). Staple all the study guides for one group together and promise to randomly select one of them to score. That score will be then be assigned to all the group members, and you had to read only one paper! This strategy helps them to be responsible for each other's learning.
 - iii. **Variation 3:** After giving credit for their completed guides, provide a short quiz that each student can answer from his completed study guide. Or, without access to the completed study guide, have students take the short quiz. If done in groups, grade only one of the quizzes per group and assign that grade to all group members.

- iv. **Variation 4:** For chapter 6, when you don't have time to provide a study guide as you did for the previous five chapters, ask the students to do steps 2a and 2b above for homework (along with the answers, of course). They may know how to organize their reading by then—or you will see from the results if they don't.
- v. **Variation 5:** For chapter 7, have students write a one paragraph summary of the main points of each section of the chapter, along with a short glossary of the key terms necessary to understand the summaries. In class, students can compare their summaries with one another and refine them for clarity, accuracy and completeness. Or you can provide a model summary paragraph against which they can compare theirs.
- vi. **Variation 6:** A different sort of reading guide may be constructed: You write a “CLOZE” summary of the main points of the chapter that you want students to comprehend. Leave blank key words that require comprehension of the chapter in order to fill in your summary. The fill-in-the-blank CLOZE summary must be constructed in such a way that students cannot complete it by merely searching the text for the missing words, as this would become a literal rather than interpretive/analytical activity. You can have them fill it in again from memory in class, after confirming they did it for homework reading. If difficult, have them do it in groups.

3.Strategy Three: work over the reading in class

- a. Go over the study guide responses with the class. This can be done in the first five minutes of class, before the written guides (typed) are handed in for credit. Warn students ahead of time that a “recitation grade” will be given to students required to read their answer to one of the study guide questions. Each student gets five points (or whatever) two or three times over the semester. Thus, students are rewarded for reading the text, answering the study guide questions, and then answering publicly. Not all study guide questions need be answered aloud. Nor do the students even need to turn in their guides if you prefer to merely credit their work by visual verification.

- b. Or, collect the written study guides and have small groups fill in the answers to a blank one from memory. This will reveal which concepts were generally grasped and remembered and which weren't.
- c. A fill-in-the-blank summary (see 3.c.vi above) could be used in class on the day the reading is due, as a test of comprehension of the chapter. Students could do it individually or in groups if you have some assurance that each group member has actually done the reading.
- d. For those students who have not done the advance reading, offer the slackers the opportunity to do the quiz or study guide in pairs/groups *with the text open* and the highest possible grade, from which points will be deducted for wrong answers, can only be 50% of the value of the quiz. That way, your slackers struggle with the material with one another, learn something and avoid zeroes. Structure the activity in such a way that, although they avoid zeroes, their grades will not be higher than any of those who did the reading and written assignment in advance.
- e. Devise any other activity that requires students to work with the concepts they have just studied, whether in groups (preferable) or individually. It is here that students become aware of what they really know and what they don't know—a crucial step in the learning process.

4. Strategy Four: have them write the exam and grade it!

(Why should you do all the work?)

After giving students credit for their study guides put them in groups and ask them to develop a set of 3-5 questions (with answers) that they believe represent the most important concepts of the chapter. You can assign different groups to construct different types of tests—essay, short answer, true false, short essay, matching, etc. (Avoid multiple choice for this activity—it's too hard to devise good items in a short period of time). Along with their test questions, they must provide the answers. This activity will take 30 or more minutes, but it is an investment that has big payoff. They cooperatively learn from one another, much the same way you do when discussing a

unit/concept/problem with a colleague who teaches the same material. They make the fine distinctions between most important and less important ideas—just as you do in making up a test. They are working over the material once again, to deepen and solidify the learning that began the previous day with the five-minute preview of the text and which continues after their guided reading of the text.

You can give the groups credit for their work and then select the best questions from each group to put on the test, according to your needs (add some of your own items, if necessary). So what if one group already “knows the answer?” Your objective is to get as many students as possible to learn and remember as much as possible, and this can be a highly motivating and engaging activity for them.

Have them grade it! Collect the exams, which they have completed in ink, and confirm/note any cross-outs or incomplete answers. Pass back the exams to score that same day or the next (next day is good because it stretches long-term memory). Groups can compare answers and determine amongst themselves what the right answers are. Or, you provide model answers and each individual scores his own exam and puts a grade on it. You can quickly scan the student’s self-graded test to see if it is accurately and honestly graded. The value of this activity is that students once again work over the material and both the test and the scoring of it become additional practice with the important concepts you want them to learn. Students also benefit from the important exercise of critically evaluating their own work.

If you use machine-scoreable exams, consider whether their important convenience limits the way you can assess all the kinds of learning you want to occur. Consider also that students will “study to the test,” and that will influence the way they engage the text. If the reading guide activities are good for learning, maybe those learning activities could be reflected in the format of some tests. Finding ways to do that without dramatically increasing correcting time is an important activity to brainstorm with like-minded colleagues. Several such work-saving ideas were presented above.

College students today are generally less-skilled and less-experienced at reading than students of recent generations. They are no less bright, and no less desirous of achievement, but they need more guidance in how to navigate what to them are less familiar and more mysterious waters than we professors sailed. Carefully designed pre-reading activities, reading guides, group quizzes, and other activities such as the ones above can improve student learning without unrealistically increasing the professor's workload. After you try a few of these and adapt them to your own preferences, the increased student learning will confirm your brilliance!

P.S. If the number and variety of the foregoing strategies seem overwhelming, remember: You only need to start with one or two strategies that you repeat several times during the semester. Then, perhaps, you can add another strategy next semester, to alternate with the first ones. Eventually, you will have a set of strategies that you find most successful and practical for meeting the textbook reading goals for your course. Good luck!~

--3,015 words, the length of a short chapter

Internet resources for active learning:

“Resources on Cooperative Learning, Group Work, and Teamwork, U. of Michigan

<http://www.crlt.umich.edu/publinks/clgt.php>

“Cooperative Learning Strategies,” Kennesaw State University

<http://edtech.kennesaw.edu/intech/cooperativelearning.htm>

“Designing Effective Group Activities: Lessons for Classroom Teaching”, Oklahoma S.U.

<http://www.ou.edu/pii/tips/ideas/groupact.html>

A few internet resources for reading math, science, and other textbooks:

Mathematics:

“Three developmental math textbook reading strategies” (5 pages)

<http://www.nade.net/documents/SCP97/SCP97.2.pdf>

“Reading mathematics textbooks”—annotated list of six internet articles

<http://www.derekbruff.com/resources/readmath.htm>

“Getting students to read the math text”—links to five internet articles

http://www.maa.org/t_and_l/exchange/ite3/reading_intro.html

“12 tips for students: reading mathematics”

<http://ems.calumet.purdue.edu/mcss/kevinlee/mathwriting/readingtips.pdf>

“HOW TO READ A MATH TEXTBOOK... and get the most out of it”

<http://www.newark.osu.edu/osunmathlab/pdf/handouts/howto/pdf/readmath.pdf>

“Does it Click or Clunk?” Good five-page article for negotiating college math textbooks

http://bsc.harvard.edu/PDFs/reading_math.pdf

“Pre-Reading Strategies in College Algebra” (26 pages)

http://media.wiley.com/product_data/excerpt/86/07879689/0787968986.pdf

“I think critically; therefore I am.” Linda Elder, *Foundation for Critical Thinking*.
<http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=407700&c=2>

“Efficient and Effective Use of the Textbook” (Not just for Social Studies)
http://www.phschool.com/eteach/social_studies/2001_05/essay.html

Cooperative Learning and **Engineering**
http://www.crlt.umich.edu/publinks/clgt_engineering.php

“How to read and study **Physics**” (17 pages)
<http://www.physics.tamu.edu/academics/HowToStudyPhysics.htm>

“The Perceived Value of College **Physics** Textbooks: Students and Instructors May Not See Eye to Eye” © 2006
http://www.colorado.edu/physics/EducationIssues/textbooks/Podolefsky_Textbooks.pdf

“Student Textbook Use in Introductory **Physics**”
<http://piggy.cis.rit.edu/franklin/perc2002/Cummings.doc>

How to read your **accounting** textbook
http://www.douglas.bc.ca/services/learning-centre/pdf/rs/RS9_40_Using_your_Accounting_Textbook.pdf

“Using Textbooks Effectively in **Psychology**: Getting Students to Read them”
http://www.psychologicalscience.org/teaching/tips/tips_0603.cfm

Reading a **philosophy** paper
<http://www.jimpryor.net/teaching/guidelines/reading.html>

“Critical Thinking: To Think Like A **Nurse**”
<http://www.criticalthinking.org/print-page.cfm?pageID=834>

“Suggestions for Improving Students’ Reading in **World History**”
http://www.phschool.com/eteach/social_studies/2001_02/essay.html