Best Practices in Student Learning

Effective Learning Approaches

Deep Processing optimizes learning... orient yourself with these ideas:

1. **Elaboration**: How does this concept/problem/question relate to others?
2. **Distinctiveness**: How is this concept/problem/question different from others?
3. **Relevance**: How can I relate this to my prior knowledge, motivation, or experience?
4. **Appropriate to Retrieval & Application**: How am I expected to use or apply this?

Good study strategies make you process information at a DEEP LEVEL...

1. Generate good questions – make them meaningful! For instance, Qs based on
   a. facts (ok but not great)
   b. connections between ideas and facts
   c. compare/contrast problems or processes
   d. think about implications or significance
   e. analysis
   f. examples that tie ideas/material together
2. Draw a concept map showing nodes and links
3. Practice retrieving and using the information in the way the teacher expects
   a. practice recall without referring to notes (out loud helps!)
   b. practice using the information → **HUGELY IMPORTANT IN MATH & SCIENCE!**

Remember, recognizing a solution is not the same as solving a problem.

Recognition → Understanding → Mastery & Application

Study Strategies for Reading & Notes... & Test Prep

SQ3R is primarily a method for reading, but it is adaptable to studying any material. Pre-reading will help you build a mental book case so that you can more easily file the information that you learn; writing questions helps you practice assessment and more actively engage with the materials.

Here are links to 2 videos that describe the method and talk about why it works.!

SQ3R: How It Works http://www.youtube.com/watch?v=P2Gic5lU-5g&feature=related SQ3R: Why It Works http://www.youtube.com/watch?v=8Ui2mpPDP7E

The **Survey** step helps to let you see the scope of the assignment and its important parts. Start with the conclusion, then go to the introduction, headings, vocabulary, diagrams/charts, and examples. The **Questioning** step engages your brain in actively approaching the material and thinking about assessment and significance; writing out a list of questions in an outline form as you go allows you to create a study guide for later. **Then go to class and take notes!** The **Reading** step can be very directed then, focusing on what is important and what is missing from your notes. The fourth step is **Recite**, which again engages your brain in two different ways; using your own words and speaking aloud, and also listening to yourself. You can do this step with a tutor, or with any study buddy, or by yourself. The last step, **Review**, encourages you to go back over your material in a focused way, thinking about the questions and which answers you know well and which you don't. Remember that because of the "question" stage, at any point after that, you can identify areas where you need help and ask directed questions to get specific support from a tutor or your professor on a topic or concept.

Think about and consider questions as you survey and as you read. **Quizzing a friend or even talking out loud to yourself will really force you to elaborate, connect, distinguish, and explain what you know**. Same goes for "concept √" questions in the book or handout questions for each section. This is especially useful with **graphs, charts, and diagrams** -- cover up the text and labels with your hands or sticky notes and then explain what you see and why it's important and how it connects to other topics and how it is different from or similar to other examples... etc.

Passive View & Re-View → Active Study

Homework & Getting Help

In terms of working on difficult daily assignments or problems, this is an approach that I recommend. It also helps address procrastination... each step is short and sweet, and if you set up appointments to get help in step 3, you have mini-deadlines that can help you stay on track.

1. **Assess & Evaluate** -- skim to figure out what you have to do, and what looks easier or harder, put check marks or question marks next to each problem. ✓+ ✓- ?
2. **Attempt** -- try all the easy stuff first, then try the harder stuff with question marks
   → Use resources -- use your book and/or notes to try and figure out the harder stuff, but don't bang your head against a wall here!
   → Identify the problem -- when you get stuck and stay stuck, write down WHY you are confused or WHAT you don't know or understand before moving on
3. **Strategic Intervention** -- with a classmate, peer tutor, or professor; explain (RECITE from SQ3R) what you do know and show WHY or WHAT you don't; get help based on specific Qs you identified àThis allows you (and/with your support resources) to identify *patterns of problems*, and target *specific help* for concepts or applications that are troublesome
4. **Reflect, Re-Attempt, Review** -- use what you've learned to try again on your own; are you doing it? did you find new stumbling blocks? can you use notes/book resources more efficiently? Keep practicing problems until you get them right, and look for challenges to attempt to help you get ready for exams. Figure out, write, and solve your own questions. Watching someone else shoot a great jump shot, even lots of times, doesn't mean you can do one yourself.

Study Time Planning & Management

3:1 RATIO: for each hour in class, spend ~3 hours outside of class... here's how:

It can help to find/recruit a study buddy who can regularly sit down with you to do homework. Talking involves explaining whole thoughts rather than skipping parts, and is much more effective than thinking or reading for helping to remember things. Be actively engaged with these buddies in STUDYING and focused, and remember to take breaks here too, & WORK INDEPENDENTLYALSO.

- Spend about an hour getting ready for each class doing homework, reading, etc. This MAY take more than an hour. Pre-read using the S&Q parts of the method. - Within 1 day of the class (same day is best), spend up to an hour reviewing the material. Compare your notes with your book, think about what made sense, and write down any main ideas, conclusions, important examples, connections, or confusion you have. Take the confusion to office hours to get sorted. This is "attempt" & "get strategic intervention."	WORK vs
- Spend an additional 3-4 hours throughout the week or on the weekend reviewing the week's material. Summarize, connect, elaborate, compare. Use the "deep processing" processes on the handout to stimulate making connections. Write down and/or say out loud what you have learned, why it's important, and how it's confusing. This becomes your study guide for the final and your awesome cheat sheet for writing papers on course topics.	STUDY

CHUNKING time

Spend 20-45 minutes focused on work (experiment to find your preference).
Choose a **task** that will approximately take this much **time**.
Put away your phone, but set a timer or alarm.
Minimize distractions and noise.
Take a 2-3 minute break; stand up or stretch, hydrate, snack, check in socially.

Repeat.

This helps you keep your brain actively engaged over longer periods of time. It allows you to feel better about your break time, and about getting back to work (I can do 20 minutes, that's not that long!) It also allows you to use even small chunks of time effectively rather than waiting until you have long blocks to get to work. Finally, coming back to your material after a break helps you remember what you were doing and make connections going forward, which is good study habit practice and will reinforce learning!