

MetaCognitive Note-Taking for better retention

To Begin: This approach to note-taking can make your time taking notes more closely connected with how well you learn. Whenever you start a new section of notes, write the Date, Course & Topics on the top of the page, then draw a line down the middle of the page, 1/4 or 1/3 the way from the left edge.

Date:

Course/Event:

Topics:

Putting this information at the top of the page primes your brain with what you already know about these topics, making it easier for you to make new connections. It also makes it much easier to keep your notes organized.

Reflections/Comments

Notes

Reflections:

Use this space for noting your reflections on what is being presented and your reactions to it.

Write or draw, include your feelings, questions, emerging ideas and other comments.

When you come back to review, your associations with how you experienced what was presented will make it easier to remember. What you put in this column acts as a key and an index, aiding recall.

Notes: *Use this space for taking traditional notes on what is being presented, in whatever way you already like using.*

Summary:

Here's where brain-based research really kicks in: *As you finish taking the notes, draw a line below your notes to write a summary. As soon as possible, take 3-5 minutes—and no more than 4-5 sentences—to write a summary of what you want to remember from these notes. Be sure to do this **before you sleep**. This will help solidify the new neural connections you want to keep. Review your summary after sleeping, within 24 hours of class, to move what you learned from short term to long term memory. When you review your notes, in most cases all you'll need to review is your summaries.*

Get More Out of Reading (In Less Time)

1) **Pre-Read: (2-10 minutes, depending on length and importance of text)**

Think about the context and function of the assignment before you read.

Decide on your purpose in this reading. Sample questions might include: (pick 2)

- Why am I being asked to read this? What is the purpose of the assignment?
- How does this assignment fit in with the rest of what we have been doing? (Is it core material, or just an example of something?)
- What am I supposed to be getting out of this? (Ideas, background information, procedures, overview?)
- What level of detail am I going to need to retain? (Do I just need to get the big picture, or will the gist be sufficient?)
- **Jot down your answers to remind you as you read.**

Think about what you already know about the text and the context in which it was written, or is used.

Sample questions might include:

- Who wrote it? What do I know about this person?
- When was it written? What do I know about that time?

Figure out what is in the book, how it is arranged, and where the important stuff is. Sample strategies include:

- Scan TOC (Table of Contents).
- Scan chapters and headings
- Look at pictures and graphs.
- Read the intro and conclusion.
- Scan introductory sections.

Think about what you know now. You may not need to read more.

2) **Critical Reading:**

- 2 Highlighters and Pen reading system
 - First highlighter is for key points and things you want to remember. (Be judicious—only highlight a few items per page.)
 - Second highlighter is for things you don't understand, questions, and places you disagree.
 - Pen is to write comments in the text. (Writing comments keeps your learning active and helps you remember the content you read.)
- If you read this way, you will always have questions and comments on the reading for class discussion and your teacher will think you are a conscientious, engaged student.

3) **Post-Reading: (10 minutes spread over 2 days)**

- Don't immediately switch gears when you finish reading. (Switching gears immediately is the surest way to erase everything you just read from your short term memory.) You will process better and remember more if you take a few minutes to reflect on what you read.
- Reflect on your pre-reading (fit it into the course goals).
- Write a summary. Some sample questions (choose 3):
 - What is this writer's purpose? Who is the audience?
 - What are the main points/topics covered?
 - What reasons and evidence support these main points?
 - How is it relevant to this course? Context.
 - What am I supposed to learn from this?
 - How and how strongly do I react to this? Why?
 - What do I think is wrong/right? Why? What reasons do I have for my beliefs?
- **Review within 24 hours** to process it again—this helps move the material from short-term to long-term memory.

Six Things You Can Do to Learn Better:

- Learning is making connections, so it only happens when your brain is active. This means that you only learn when you are *consciously engaged in your learning*—studying on autopilot is just a waste of time. Neurologically, learning has the structure of an analogy—that’s why analogies and mnemonic devices work so well as learning tools. The more of these you can create, the more and better you will learn—because the *process of creating* them helps you understand better and remember better.
- Never read any assigned reading unless you know your purpose for doing the reading. Stop when you’ve accomplished your purpose. (You’ll spend a lot less time reading and you’ll remember better because you’ll read actively. But remember, you need to be honest and thoughtful about your purposes.)
- When you read, stop after every chapter and write a 3-5 sentence summary. (Take no more than 5 minutes to write the summary.) Review your summary (and notes if you have time) within 24 hours. The review moves information from short-term to long-term memory, but it loses effectiveness rapidly, so it has to happen within 24 hours to work well.
- Your attention span naturally drops after 20-30 minutes, so set a timer to remind you to get up and stretch every 20 minutes. This will increase blood flow, keep you more active, and increase your comprehension. Use this short break (30 sec. to 2 min.) to think about what you’ve been doing.
- Your attention span drops significantly after 2 hours, so every two hours take a real break—10-15 minutes. Do something that involves different senses—listen to music, smell something strong, explore some new textures. (Engaging multiple senses opens more learning pathways and makes your experience richer and easier to recall.) When you return to studying, take five minutes (no more) to write a summary of what you have done so far.
- Make and keep a planner—most students radically underestimate how long it will take to do things. If you keep a record, you will learn how long it takes you to do certain tasks and you can set aside time for those tasks so that they don’t overwhelm you. (Being overwhelmed is stressful and bad for learning.)
- A bonus tip: Challenge yourself frequently with new and difficult material. The only way to grow (and keep) new brain cells and the only way to physically increase the size and capacity of your brain is to learn new and difficult material. It’s the fastest way to learn, and pushing your limits is the only way you’ll ever know how good you really are.

Helpful References about Learning

- Ambrose, Susan, et al. *How Learning Works: Seven Research-Based Principles for Smart Teaching*. San Francisco, CA. Jossey Bass, 2010.
- Brackett, M. A., & Katulak, N. A. Emotional intelligence in the classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide*. New York, NY. Psychology Press/Taylor Wiley, 2007.
- Bransford, John, et al. *How People Learn: Brain, Mind, Experience and School* (Expanded Edition). Washington DC: National Academies Press, 2000.
- Gee, James Paul. *What Video Games Have to Teach Us about Learning and Literacy*. New York, NY. Palgrave MacMillan, 2007.
- Gee, James Paul. *New Digital Media and Learning as an Emerging Area and "Worked Examples" as One Way Forward*. Cambridge, MA. MIT Press, 2010.
- Hale-Evans, Ron. *Mind Performance Hacks: Tips and Tricks for Overclocking Your Brain*. Sebastopol, CA. O'Reilly Media, 2006.
- Jensen, Eric. *Brain-Based Learning: The New Paradigm of Teaching* (2nd ed). Thousand Oaks, CA, Corwin Press, 2008.
- Kolb, D. A. *Experiential Learning*. Englewood Cliffs, NJ. Prentice Hall, 1984.
- Leamson, Robert. *Thinking about Teaching and Learning: Developing Habits of Learning with First Year College and University Students*. Sterling, VA, Stylus Publishing, 1999.
- Perry, William G., Jr. *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. New York, NY. Holt, Rinehart, and Winston, 1970.
- Ratey, John, J. *A User's Guide to the Brain: Perception, Attention and the Four Theaters of the Brain*. New York, NY, Vintage Books, 2001.
- Salovey, P., Brackett, M. A., & Mayer, J. D. *Emotional intelligence: Key Readings on the Mayer and Salovey Model*. Port Chester, NY. Dude, 2004.
- Schwartz, Jerome M., and Sharon Begley. *The Mind and the Brain: Neuroplasticity and the Power of Mental Force*. New York, NY. Harper Collins, 2002.
- Seligman, M. E. P. *Flourish: A Visionary New Understanding of Happiness and Well-being*. New York, NY. Free Press, 2011.
- Seymour, E., Wiese, D., Hunter, A. & Daffinrud, S.M. (2000) Creating a Better Mousetrap: On-line Student Assessment of their Learning Gains. Boulder, CO: University of Colorado, Bureau of Sociological Research.
- Sousa, David. *Mind, Brain and Education: Neuroscience Implications for the Classroom*. Bloomington, IN. Solution Tree Press, 2010.
- Stafford, Tom, and Matt Webb. *Mind Hacks: Tips and Tricks for Using Your Brain*. Sebastopol, CA. O'Reilly Media, 2004.
- Steen, R. Grant. *The Evolving Brain: The Known and the Unknown*. Amherst, NY. Prometheus Books, 2007.
- Svinicki, Marilla. *Learning and Motivation in the Postsecondary Classroom*. San Francisco, CA, Anker Publishing, 2004.
- Weston, T. (2008). How instructors use the SALG for formative evaluation. Boulder, CO: ATLAS Evaluation Report.
- Zull, James. *The Art of Changing the Brain: Enriching the Practice of Teaching by Exploring the Biology of Learning*. Sterling, VA, Stylus Publishing, 2002.
- Zull, James. *From Brain to Mind: Using Neuroscience as a Guide for Change in Education*. Sterling, VA. Stylus Publishing, 2011.