

COLL 175: READING STRATEGIES ACROSS THE CURRICULUM



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Licensing

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1.1: Chapter 1 Goals

In Chapter 1, we are going to begin by learning about a general way to structure our thinking about **reading as a process** rather than **reading as an activity**.

When assigned a reading, most students treat the reading assignment as ***task on a checklist*** rather than as ***a process to help them learn material and concepts***.

In short, there are strategies, activities, and tasks successful readers do before they read, while they read, and after they read. Throughout the rest of the textbook and course, we will learn about and practice these strategies, activities, and tasks with your other courses' textbooks.

In addition, in chapter 1, we will also be learning about general frameworks and mindsets that will help with your long-term growth as an active, effective reader and studier!

Goals:

- Explain **Metacognition** and why it is important for learning
- Apply the **Reading Process** to textbook reading
- Improve **Focus** while reading
- Improve **Recall** after reading

1.2: Metacognition and Growth Mindset

Meta: "showing an explicit awareness of oneself; deal critically with" (Merriam-Webster)

Cognition: "relating to conscious intellectual activity (such as thinking, reasoning, or remembering)" (Merriam-Webster)

Therefore, "**metacognition**" is *thinking critically about your learning/intellectual activity*.

In less "academic-speak," "metacognition" is the process of self-improvement through reflection and then making changes based on that reflection. When you engage in metacognition, you aren't just concerned with "what?" you learned, but also with "how?" you learned it (e.g., were the methods I used to learn effective?) and "why?" you learned it (e.g., how will I use this information? can I apply what I'm learning?)

The purpose of this class is to identify, analyze, and demonstrate knowledge of and the ability to use different reading skills and strategies IN YOUR OTHER COURSES. This only works if YOU carefully consider how the skill or strategy is working for you and are honest about improvement. You must be active in the learning process. Not every strategy works perfectly for every learner in every setting. Individual differences, the specifics of how the strategy is used, and the content the learner is focusing on all affect the efficacy of any strategy -- you must practice metacognition to see how well the strategy is working for you, and then more importantly, make changes based on your findings.

The Improvement Process

In general, I like to think of improvement in the following model:

- **Planning**
 - Goal Setting
 - Strategies
 - Resources
- **Monitoring**
 - Collect Data and Track Progress
 - Metacognition, Grades, Feedback
- **Evaluating**
 - Assess and Evaluate successes and failures
 - Failure is a part of learning! Failure isn't 100% negative -- AS LONG AS WE LEARN AND MAKE CHANGES BECAUSE OF IT!
 - Be accountable
 - Go back to planning and try again with your new knowledge!

Often, people make a plan but forget about the monitoring and evaluating steps.

One example of this is "New Year Resolutions." How many people do you know that make a New Year Resolution? How many of those people actually follow through and are successful? Even worse, of the people who are not successful in keeping their resolution, how many are metacognitively reflective about the failure? Do they actually make changes? Or do they end up having the same Resolution next year with the same general plan?

Another example might be "run a marathon in 12 weeks with a 12 minute per mile average."

To be effective at this goal, we need to make a plan. When we set a goal and make a plan, popular frameworks are SMART goals and SWOT analysis as part of the planning stage. There are many great resources and videos about creating SMART goals and using a SWOT analysis to help meet those goals. Your professor is happy to discuss these ideas with you! However, in a one-credit hour course, we simply don't have time to dive into those methods any further (particularly as those aren't course goals in our course outline!).

- First, I have to be honest with myself and do some type of pre-test -- how far and how fast can I run right now? Then, I can see how much improvement I need to make -- is this realistic? If so, how much progress do I need to make per week/per every 2 weeks?

- Second, I need to make a **plan** to meet those biweekly progress goals.
 - Obviously, I need to make sure I'm scheduling time to run. Those scheduled runs probably need to gradually increase in distance over the next 8 weeks.
 - when and where?
 - Should I just run for distance? Or should I do other leg strengthening/conditioning (e.g., squats? sprint training? jump training? yoga?)? When and where should I do those?
 - How much rest do I need? When should I schedule rest days?
- Third, I need to **monitor my progress** towards my goal and **evaluate** if I need to make changes to my plan.
 - Should I monitor every day? Probably not -- some fluctuations in mile time and stamina is expected... measuring it every day probably isn't actually valuable...
 - Should I monitor it only in Week 11 (1 week before the marathon)? Probably not -- if I only find out I'm not meeting my goal in week 11, I don't have any time to actually fix the problem(s) before the marathon.
 - In this specific case, I probably want to monitor my progress weekly or bi-weekly. Every 7-14 days, I test my progress. Then, particularly if I'm not meeting my goal, I try to think about what changes I should make to my workout plan for the next 7-14 day segment.

Growth Mindset

In this class (and in most of education in general), we use the "growth mindset." Learning is a *process* -- it takes time: practice, failure, an examination of the attempt (metacognition), and more practice!

- Growth vs. Fixed Mindset
 - Growth
 - intelligence and ability can be developed
 - focus on learning goals, like being able to apply a concept beyond class
 - learn from mistakes by looking at what could be improved and making a plan to do so
 - embrace challenges because they can provide new opportunities and/or help you improve
 - believe that people can change
 - Fixed
 - intelligence and ability are fixed
 - focus on performance goals, like passing a test
 - identify yourself as a failure when you make an error and give up
 - avoid challenges because they might make you look less intelligent to others
 - believe that people can't change
 - Adapted from Dweck, Carol S. *Mindset: The New Psychology of Success*. Ballantine Books, 2006.
- Extra Credit Opportunity: Not really sure about "growth mindset"? Khan Academy has some great resources about this -- complete their "growth mindset" unit -- send me your notes over email and a screenshot of the checkmarks showing completion. Up to 2 points/2% of course grade EC depending on what/how much you choose to complete. [Link to Growth Mindset from Khan Academy \(opens in new window\)](https://www.khanacademy.org/growth-mindset) [www.khanacademy.org]

Apply Metacognition to Other Courses

When you are learning skills and strategies in this course, remember the purpose is to transfer it to your other courses -- always try to apply the lesson to your real-world work. Then, think deeply about the process:

- How did the skill/strategy help?
- Do I need more clarification about the skill/strategy?
- Should I make changes to the skill/strategy so that it works better for me?
- Were there external factors that hurt my usage of the skill?
- When can I best utilize this skill/strategy in my content area classes?

Note that these are just some examples of "metacognitive" questions you might ask yourself about these lessons.

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1.3: The Reading Process

What is "reading?"

Generally, when people think of "reading," they usually think about 2 things:

- the physical action of sitting down, opening a book, and scanning the symbols on the page
- using those symbols to form sounds and then meaning

At the most basic level, that's really it -- we use symbols to create meaning and express thought. The first Merriam-Webster definition is "to receive or take in the sense of (letters, symbols, etc.) especially by sight."

Unfortunately, this definition of "reading" doesn't truly show all the things you are actually doing when you read **effectively**.

Have you ever "read" something, but as soon as you get to the bottom of the page or even after turning a few pages, you recognize "I don't know what I just read!" [First, GOOD! That's [metacognition](#)! you've just made an observation about how effectively you are learning ... now, step 2 is to do something to fix it!]

When that happens, you've done the external part of reading, but you didn't actually form meaning. **So, how exactly do we do that effectively?**

The ReadingProcess is a good place to start.

Reading effectively doesn't begin by simply picking up the text and diving right in. Throughout the course, we will study the components more in-depth: keep a "growth mindset!"

By treating reading as a "process," you are more likely to engage in active reading strategies throughout the reading -- this will improve your comprehension and help you remember the material more effectively.

First, note that this process is NOT a linear process wherein you should do the same steps in the same order every time you read. Being an active, metacognitive reader will help guide you how often and when to use the strategies. When my reading is going well, many of these processes happen automatically. When my reading is not going well, it's typically because one or more of these things didn't happen automatically -> metacognitive reflection -> try a strategy to support the skill I didn't already use automatically.

Before Reading

- Set and evaluate purposes for reading
- Preview the text and make predictions
 - Identify patterns of organization in texts
 - Activate prior knowledge (and/or build up my prior knowledge if needed)
- Create a plan of attack
 - speed/style; time/schedule

During Reading

- Annotate
- Take notes
- Make connections to the text
- Monitor and clarify meaning
 - Apply vocabulary building and word study strategies
 - Summarize main ideas and details
 - Create questions regarding the author, text, self-understanding, and think aloud
- Visualize, create and interpret graphics

- Make logical inferences

After Reading

- Summarize main ideas and details
- Review, create and maintain a plan for review

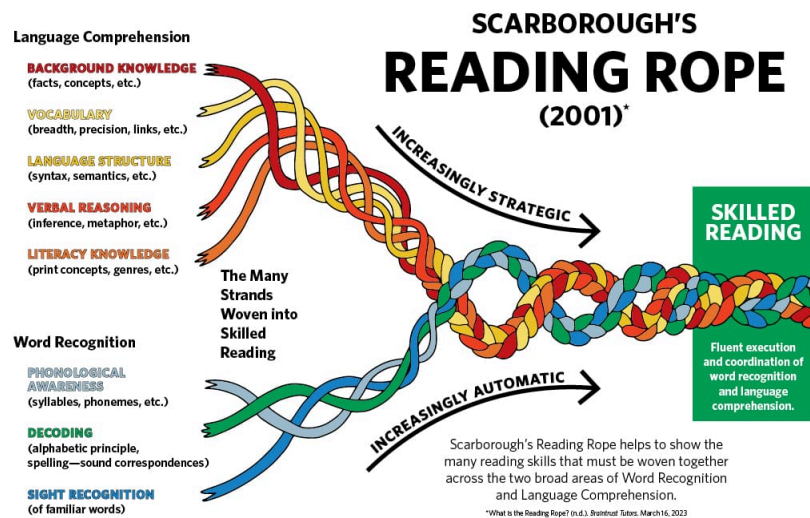
However, this process is NOT necessarily linear (it's not a checklist where each skill/strategy happens in the same order each time you read). For some students, it's more useful to just have a list without it being broken up by before, during, and after reading. From the research over the years, these 8 skills/strategies seem to be repeatedly listed as best practices. I call these together "Active Reading."

Active Reading

- Set (your) and Evaluate (the author's) Purposes
- Preview the Text and Make Predictions
- Activate Prior Knowledge, Build Background Knowledge, and Make Connections
- Monitor and Clarify Meaning
- Visualize; Create and/or Interpret Visual Aids/Graphics
- Make Inferences
- Question the Author and Text, Self-Question, Think Aloud
- Summarize Main Ideas and Details

Scarborough's Reading Rope

Another way you might visualize all the processes that happen when we read effectively is the "reading rope."



1.4: Metacognition and the Reading Process

Before Reading

- Why am I reading this?
- How does this reading fit into the broader class?
- What background knowledge do I already have?
- What connections can I make to the text?
- How much time will this take me? When will I work on it? Where? How will I best stay focused?

During Reading

- Am I focusing? Am I becoming distracted?
- Can I paraphrase and/or summarize what I am reading?
- Am I keeping my purpose for reading and the author's purpose in mind?
- When I get confused, what skills/strategies could I use to aid comprehension?

After Reading

- Can I explain the material in my own words? Could I teach it to someone else?
- How does this reading relate to the other readings/knowledge in the course?
- Do I need to re-read some of the text?
- What's my plan for studying this material? for making it part of my long-term memory?
 - Should I create graphic organizers?
 - When should I review? How often? How should I review?
 - How will I synthesize this information over time?
- Am I focusing on the "what do I need to know?" question only? Or am I also considering the "how am I learning?" "how will I use/apply this info?" and "how does this info connect with other knowledge/course content?" type questions.
 - Remember that in college, your professors will expect you to go beyond just the "what" and into the application of the content more often!

Note that these are only some examples of metacognitive questions I ask whenever I read actively. This isn't meant to be a checklist for every reading.

Here is a more detailed resource about Metacognition and the Reading Process from UNC at Chapel Hill: [link to UNC page\(opens in new window\)](https://learningcenter.unc.edu/) [learningcenter.unc.edu]

1.5: Bloom's Taxonomy

Bloom's Taxonomy is another good way to think about this idea of "what is reading?" and "how is active reading different than what I've done before?" type questions.

In short, in most college classes, simply comprehending or understanding the text is not always enough to get a good grade in the class. The instructor will often ask you to do things that go "beyond comprehension."

So, what's "beyond comprehension" in a college course? [Note that these models are not uniquely different from the models in the previous pages, it's more just a different way of looking at it. When I read actively, those question stems and/or skills and/or strategies *should* be helping you first understand the text but, more importantly, help you move into the "higher" levels of Bloom's Taxonomy.]

Bloom's Taxonomy pyramid

Circular diagram showing Bloom's Taxonomy

1.6: Focus and General Study Habits Tips

This is a good open-source resource (aka free!) that has many helpful pages throughout: [link to open source textbook\(opens in new window\)](#) [openoregon.pressbooks.pub]

For Focus specifically, this page is a great place to start: [Create an Optimal Setting for Reading\(opens in new window\)](#)

Here are my thoughts about "Focus" and "Study Habits"

Increase in independent learning, expectations in college, what is a credit hour?

Many students who are transitioning to college struggle with forming good study habits. It's not totally their fault! There is a big jump in responsibility and out-of-class workload from high school to college: in high school, you see your teacher for ~4.5 hours per week, while in college you see your professor for ~2.5 hours per week. Add in the fact that college is more difficult and has more work in general and you can quickly see that the independent out-of-class workload expectations are MUCH (maybe 3x?) higher than in high school.

Evidence about the workload in college:

I hesitate to even delve into this because there is a LOT of argument in higher education about this topic; however, I think it is valuable as just general knowledge/discussion topic:

What is a credit hour? Basically, at some point, a regulatory body has to decide if your coursework counts towards a degree, if it's transferable to other colleges, and if your degree counts ("accreditation process"). You might have seen stories in the news lately about some for-profit colleges losing their accreditation. Lots of federal money goes to colleges (both directly to colleges and indirectly through the students in the form of loans and grants). The federal government has to first judge if that program is "accredited" before it can be eligible for those federal dollars. In that process, they established a guideline:

- 1 credit hour = 1 hour in-class and 1-3 hours of out-of-class homework (per week for 15 weeks)
- Therefore, a 3 credit hour class (typical college classes are 3 credit hours) is **3 hours in-class + 3-9 hours of homework (per week for 15 weeks)**
- This is where that idea of "full-time student" comes from:
 - 12 credit hours = 12 hours in class + 12-36 hours of homework per week = 24-48 hours/week (aka, a full-time job!)
 - To finish most degrees in the "normal" time, you generally need to take 15 hours/semester... so, college is definitely a full-time job!

If you feel like you need more intensive study skills support, consider taking more classes from the College Success Department here at JCCC.

General Recommendations:

Most research finds we are most productive in 20-75 minute sessions with 5-15 minute breaks between each session.

For the study sessions:

- Set a goal
- Stick to that topic/goal for that time period
- I vary the time based on difficulty of topic, my prior knowledge level, my interest, and my general mood and motivation for that day
- check out those 6 poster resources for other ideas on how to study more productively (get away from just passively re-reading!)

For the breaks:

- No tech!
 - Lingering distraction effect after the break
 - likely to extend the break longer than planned
- Get up and do something active/physical -- get the blood pumping again and increase oxygen flow!
 - some research has found reasonably strong evidence about positive effects of going outside
- Have a snack
- consider a reward system and give yourself that reward

In time management, when you put "study" or "work on school," that's fine for broad weekly planning (personally, I try to narrow it slightly more than this though -- make sure I have 2 hours per credit hour for each class allocated out). However, as you actually get into the day, you really want to set a specific goal for each study session -- more specific than "study x class" -> you want to have something you can measure at the end so you can confidently say "yes, I met that goal" or "no, I need to schedule more time for this tomorrow/next week."

In general, the overly general "study" time is typically spent doing receptive study activities repeatedly (such as re-reading your notes) that aren't actually very effective study methods.

For example, to avoid these issues, I might set up a 90 minute study plan like this [NOTE: we will cover how to do these steps throughout the rest of this course!]:

- 10 minutes: Preview Chapter 2
 - Make a plan for reading the chapter
 - Execute the plan for reading the chapter
- 30 minutes: Read, annotate, take notes on sections 2.1 and 2.2
- 10 minute break
 - snack time? walk outside? take a longer break and get some exercise?
- 20 minutes: Productive Study Technique: Active Recall activity
 - Write the heading for 2.1 and 2.2 at the top of the page, map or summarize what I remember
 - Pull my notes/annotation out from previous step, compare
 - add info from notes that I missed in a second color
- 5 minute break
- 15 minutes: Elaboration/synthesis
 - re-read my lecture notes from the last two classes
 - what's similar and different from lecture vs. textbook? Can I summarize this info across sources together? Can I make connections across the course content?

Then, tomorrow, I'll do a pretty similar process with sections 2.3 and 2.4.

However, one of my 20 minute sessions is going to be to repeat the productive study technique for 2.1 and 2.2 (i.e., I might make that part 30 minutes on day 2 so I can do 2.1-2.4 -- hopefully it's pretty quick for 2.1 and 2.2 as this isn't your first exposure anymore). If there's not much of the second color (stuff I forgot and had to fill in after reviewing my notes) -> I'll take a day off that material and try it again on day 4. If there's a lot of that second color -> I'm either going to try it again on day 3 or I might back it up and do more receptive study of the parts I forgot on day 3. This might also be a signal that it's time to go to tutoring or office hours for this topic.

Have a set time and place to study

I look at it the same way as working out. Some people "just do it" -- they can work out at home in their living room; they are motivated to use their free time to go for a run, etc. But, sadly, most of us aren't that person. If I don't physically go to the gym, I'm probably not even going to work out at all, let alone get a good workout, even if I do try. It's just too easy to cut the workout short when it gets tough (but that's the point when gains happen!). Finally, you don't add muscle going to the gym once per week. It takes it becoming **a habit**.

In order to make it **a habit**, you need a schedule. You need set times and places that you study every week. Every week at the same time, same place. Train your mind to be ready to learn at that time. Unfortunately, habits take a long time to form and once formed, take a long time to change. Research varies, but most papers I've read seem to be in the 30-90 day range with 45-60 iterations of the habit-forming behavior. So... don't be too hard on yourself and give yourself grace when you are trying to change a bad habit or instill a good habit. It takes a long time!

I like to picture "desire paths" for habit formation:



(wikipedia's desire path page)

If the desire path is a bad habit you are trying to get rid of, the pathway won't go away after one time that you avoid the bad habit -- it's going to take months of you not taking that bad pathway/bad habit before the grass will regrow -> when that grass finally regrows though, you will wonder how you ever had trouble avoiding that bad habit in the first place (remember, your brain and neural pathways change!).

If it's a good habit, it takes you walking on that pathway many times before that pathway becomes stable enough that you will continue to use it.

Making it a habit helps in other ways too:

- it stops you from cramming,
- keeps the study sessions of manageable lengths of time, and
- helps you return to your information repeatedly
 - (making it more likely to transfer to your long-term memory -- when you return to your notes and summarize them and then synthesize information from later lectures into that summary too [basically keeping a running, continuously changing summary of course content] you are more likely to remember it on the test/in the workplace).
- Finally, each study session should have a specific goal. Give yourself a goal and celebrate when you meet it. Meeting goals is pleasurable: turn studying into something pleasurable, not a chore.

Second, you need a **place** to study. Your couch is for bingeing netflix/playing video games/scrolling your phone. When you sit on the couch, your brain is trained to want to do those pleasurable things. Trying to do homework on the couch is like bailing a leaky boat -- that temptation is going to always be in the back of your mind stealing some of your precious focus away. Lots of research supports that going to a specific place to study trains your brain to be ready to work.

- Example: When I was in college, I lived in a house with several other guys. If I tried to study at home, it simply didn't happen. "Yo Nick, want to play 'Smash?'" (N64!, yeah I'm old, but I'll whoop you on the N64 version!) It takes a LOT of willpower to overcome that; why even put yourself in that position? Have a specific place you go to, even if that is within your house, that is away from the potential distractions. This has the added benefit of signaling to those roommates that you are in "study-mode." [If your "roommate" is a toddler, even a different room is probably not a good enough signal!]

Another example of this is even the clothing we choose to wear might influence our thinking, emotions, and motivation (I'm not necessarily advocating dressing up or dressing a certain way to study -- more just that this shows, in yet another example, that ideas seemingly unrelated to studying choices (where, when, even what we wear while studying) can have effects on our learning. Here is an article about the [studyLinks to an external site.\(opens in new window\)](#) (extra credit, The Psychological Needs of Clothing section, specifically).

Use parental controls on your technology of choice

Simply, social media has 1 primary purpose: to keep you on it as long as possible (so they can make more money by selling ad revenue and getting more data about you). These are billion dollar companies for a reason: **they are REALLY REALLY good at keeping you sucked in once you start.** The solution: when it's your time to study, have a parental control set up so that you CAN'T go to the website (or play video games [most game systems have this feature too] or whatever it is that distracts you). Ex: I have a social media account that I use to share videos with friends -- it doesn't open/notify my homescreen on my phone during my "work-time" or when I am on campus (I set a "fence" around campus where those messages won't come through until I leave campus -- if it's an emergency, my regular texts still work and my family/friends know this).

If you use social media to take a brain-break, set a timer! (really, just don't use social media as a break though) Brain breaks are good. Brain breaks that turn into an hour on social media are no longer brain breaks -- that's procrastination. Also, when you use social media for a break (even a short one), there is sometimes (often?) a residual effect -- you keep thinking about the social media content after you turn it off -- that's **stealing** your focus and you aren't working at 100%. Take a walk, stretch, do some burpees or jumping jacks -- all of those will be better brain breaks because they will get your blood flowing, clear your mind, and won't have that residual effect [I mean, I at least don't think about how awesome that last push-up was after I stop, haha].

Finally, turn off your chat (especially if it pops-up!) on your computer during work time. Research doesn't agree on how long it takes to get back to 100% focus, but most research puts it in the several-minutes-time-range. **Each time you read a chat message and lose focus on your work, it takes several minutes to get back to full 100% focus.** That means you aren't working at your full-potential -- 2 choices from here: you've done not as good of a job as you could have OR you have to spend more time on it. Both bad options. TURN OFF THE POP-UP CHAT while you are working. Silence your phone. Put it somewhere you can't see or reach it. I promise it will still be there when you finish.

Self-Advocate and Build Connections/Relationships with Resources

Because there is so much independent work time in college, it's important to have a plan for how to get help. In our course, this is built-in with the Active Study Visits. However, most college courses do not build this in.

Make sure you know about the tutoring resources here at JCCC. The first floor of the library has resource centers for each discipline -- it's a great source for drop-in, occasional help. More intensive support can be found in the AAC -- you can get a free weekly tutor (same time, same person, same place). It's free; use it!

Meet with your professors. If you are exploring different majors, use the professors as a resource -- what will future courses be like in this discipline? What kinds of jobs does it lead to? If you know your major, get to know those professors. They are experts -- they will know about internships and job opportunities. They can be a resource for help in future classes. They are a great source for Letters of Recommendation later on. Nearly all the research agrees: students who get to know their professors have higher GPAs, get more scholarships, and have more success in the initial job market (which usually translates to higher lifetime earnings... which is a major point of going to college, right?).

Work/Study/Life Balance

I get it. I really do. We all have lives outside of JCCC. Be realistic about your expectations and how much time you can really commit to taking classes. Speak with your academic counselor about expected college workload. Think about what a credit hour means and how much time you really have to work on school.

If you feel overwhelmed, remember that JCCC has free professional (not associated with JCCC) counseling services. You can't perform at your academic best when you aren't mentally healthy. It's free; use it if you need it.

Regarding working while in school: again, I get it. We all have financial responsibilities (some of us more than others -- we don't get to choose the cards, just how we play them; comparison is often the thief of joy).

Generally speaking, the pendulum of "student loan acceptance" has swung back too far in my opinion. When I was young, students were actively encouraged to take out huge loans -- and many 18-year-olds got in way over their heads, owing way more money than they'd make with the degree. My generation is the height of the student loan crisis. [IMO, some of it is (a lack of?) personal responsibility, some of it is a systemic problem -- how much of each is where the disagreement happens in most cases]

That fear of student loan debt has (rightfully) made students very wary of taking out loans.

However, not all debt is automatically bad debt, and sometimes it can even make financial sense to take out a loan so you can spend more time studying. If all debt were bad, very few people would be able to start companies, buy homes, buy real-estate to rent out etc. What do those have in common? **They are a wealth-producing asset. A college degree is (usually) very much a wealth-producing asset.** [The evidence is still quite clear that, on average, college graduates make more money than non-college graduates. College is still a good economic choice, especially by beginning at a community college to keep costs down. Evidence: [BLS earnings by education\(opens in new window\)](#) [www.bls.gov] [BLS alternate data source\(opens in new window\)](#) [www.bls.gov] and [alternate data source\(opens in new window\)](#) [www.northeastern.edu]

Ex: [Anecdote Alert!! While anecdotes can be very compelling, they only represent ONE story.] I did good my first year of college, but I didn't do great. I worked like 20 hours/week @ \$8.00/hour (crazy that starting wages have stagnated so much, but that's another issue...).

Anyway, I was applying to a very competitive program my Sophomore year. My GPA was good, but not good enough to be a "sure thing." With that GPA, it was a very real possibility I wouldn't get in. And I definitely wasn't getting scholarships or anything.

So... I decided not to work Sophomore year. I treated school like my job -- I studied those 20 hours per week instead of working (I literally made an excel spreadsheet that I used to clock-in and clock out -- if I didn't work/study enough, I didn't transfer the money to my checking account from my savings account). I took 18 hours and got a 4.0 (humblebrag?). First, this got me into the program that I wanted.

But, more importantly, it moved my GPA up above the "magic number" -- I was now eligible for the wonderful world of scholarships. **I actually ended up "making" more money off scholarships from my increased GPA than I would have from working my \$8.00/hour job for 20 hours a week for 15 weeks (\$2400).** [I still worked A LOT while not in school [summer, winter break], pretty much as much as I could]

To reiterate, I got more than \$2400 in **automatic** scholarships because my GPA was over the magic GPA number. If I had continued to work that 20 hours/week, I probably wouldn't have gotten above that magic number. [oh, and remember that scholarships are tax free...]

Here at JCCC ([scholarships link \[www.jccc.edu\]](http://www.jccc.edu) everyone should apply for scholarships!) the magic GPA number varies more than at some institutions; however, the "JCCC Academic Scholarship" requires a 3.5 [note: there are other scholarships available with lower requirements -- APPLY!!!]. For transferring, different Universities have different scholarships based on your transfer GPA. At Pitt State, the magic number is 3.25 (at 3.25, you get an automatic 2k/per year scholarship) [at 3.24, you get NOTHING! "no soup for you!"(Seinfeld reference...)] ([sourceLinks to an external site.opens in new window](#)). At KU, a 3.5 gets you 2k/year; a 3.25 gets you 1.25k/year ([sourceLinks to an external site.opens in new window](#)). [[Emporia State exampleLinks to an external site.opens in new window](#)] Most Universities are similar -- the magic number is usually 3.25 or 3.5, with thousands of dollars on the line. **Simply, a small boost to the GPA could mean big money. It could mean more money in the long-run than working more hours at a lower paying job now.**

Of course, that means you have to actually study with that extra time...

This isn't a decision to make lightly, but it is something you should consider.

Attention Video Resources

YouTube Video

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In addition, we can't actually even see all that is happening around us (we don't see every color spectrum etc.).

YouTube Video

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DON'T READ ANY FURTHER UNTIL AFTER YOU WATCH THE VIDEO ABOVE!

In general, students who see the distraction don't get the number of passes correct. Students who get the number of passes correct typically don't see the gorilla.

Note: don't worry about the other tests mentioned in this video -- you are welcome to do them, but I think you will get the big ideas from the video without actually doing all the tests (you did one of them above already!).

YouTube Video

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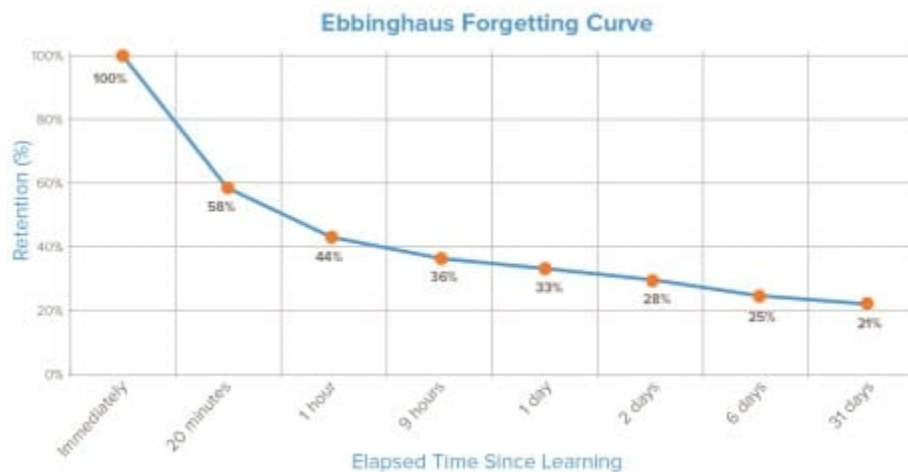


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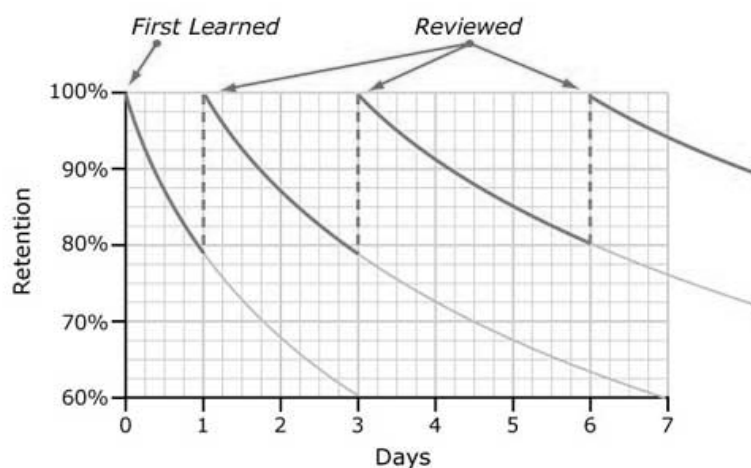
1.7: Remembering

After you finish the initial reading process, you should return to your notes/annotations sometime later (disagreement on how much later -- typically immediately after the reading/lecture up to 72 hours in most research aka, typically it's between 1 and 3 days in most research). During that return to the material, you should synthesize that info within the rest of the course material and future course material. It's important to return to the material later to move it into long-term memory. In general, I suggest reviewing previous notes (and potentially adding info to them OR maybe rewriting 3 sets of notes taken over 2 weeks into one more summarized version etc.) every 2-3 weeks in a 15 week course (this would be my 3rd-5th time looking at the notes, depending on my prior knowledge/ease of understanding) -- this timeline allows for multiple quick review sessions before typical major test dates. **[Short, repeated study session are best for learning!]**

There are many different models of this chart based on different studies, but they all have similar ideas:



Basically, over time, you forget more and more. So, repeated study sessions of material, and the re-synthesis of that info into the new info you are learning in future weeks of the course makes the chart into something more like this: (again, there are many different models based on different studies)



The idea here is that as you review and repeat your learning, it will take **longer to forget material** and you will **forget less material** over the specified time-period with each repetition. The specific time frames and % of material forgotten/remembered varies in different studies, but most studies have pretty remarkably similar "forgetting curves." In a lot of the research, they call this repetition over time **"spaced repetition."**

Spaced Repetition

There is an overwhelming body of research that compares cramming vs. spaced repetition. Spoiler: Spaced Repetition models always win.

In one study, they compared students who studied for 8 hours the day before the test VS. students who studied for only 4 hours, but they studied 8 times for 30-minutes each time over a two week period before the test.

The students in the 4 hour group did better on the test. They studied half the time, but they still did better! **More isn't always the answer. It's not just about how long you study -- it's also about "how effective are your study methods?"**

Should I take notes while I complete my first reading of the text? Or should I annotate and try to get the overall idea, then go back and take notes?

However, the research doesn't agree on everything. The major disagreement among note-taking experts:

-- the student should read, annotate, and process/synthesize the chapter first, then review the chapter and take notes (the "review" varies from skimming to fully re-reading the chapter)

OR

-- the student should annotate and take notes while reading

My suggestion: Try it different ways throughout the semester. It's also possible that different chapters/texts/classes will be better suited to the different styles. I look at it like a toolbox -- I can't always use the same tool for every job; some tools are better at specific purposes. Get familiar with as many different tools as you can while specializing in some tools that play to your strengths. [like for me, when I read something complex that I have low prior knowledge, I annotate, then after annotating, mapping is my preference followed by outlining or summarizing 24-36 hours later -- I've only learned that through experience and trying the different ways]

My style/preference:

- I use my preview to generate a basic outline/map/questions for the basic first draft of notes. First, I annotate at a paragraph by paragraph level. (Think about the annotating lecture -- this is a good way to ensure I am reading actively -- if I go a couple pages with no annotations, that's probably a bad sign...).
- Then, I tend to read by major heading (think 2-3 pages of a dense textbook at a time; in our textbook, I'd use the practices as my stopping points). I typically will read an entire section of the chapter, stopping to take notes only on unfamiliar, important vocabulary (which I generally both copy the definition word-for-word from the textbook AND try to put it in my own words or use another vocab study strategy to increase my exposures (e.g., frayer model for example).
- Next, I try to draw a map or make a quick, loose outline of the material **without** looking back at the section. I then have a pretty quick, clear idea of how much I actually understood when I skim back through those 2-3 pages (can I explain the major parts of each sub-section/sub-heading? are there major ideas I didn't write about? Do I need examples of what I wrote?) . Sometimes a scan of the pages shows that I'm good to move on, sometimes it shows me I need to re-read more carefully.
 - [I personally find that if I stop too often to take notes/try to take notes while reading/try to take notes paragraph by paragraph, I actually get distracted by the note-taking -- I focus more on the note-taking than understanding the material! That defeats the whole purpose as the note-taking causes my comprehension to go down!]
- Then, after I've done this several times and have read the whole chapter, I take a look at my notes as a whole. I try to synthesize it all together: how do the ideas all fit together to form a cohesive chapter (the author put it all together for a reason...)? what were the most important things I needed to learn? how does this info fit into the course as a whole?

Sometimes this results in new notes, sometimes it results in me adding some material, sometimes I end up with arrows connecting parts of the notes.

Finally, sometime later (research disagrees on exactly how long... but most is somewhere between 1-3 days), I pull out the notes again to go over them. This serves 2 purposes: 1) repeated exposure (see above) and 2) it allows me to synthesize how this info fits into the rest of the course. In a typical liberal arts course, the next 2 weeks of readings and lectures are going to build on the material from this chapter (maybe it expands upon it and explains it further, maybe it gives another example of the phenomenon, maybe it gives counter-evidence, maybe it is trying to establish cause-effect or problem-solution). I should be paying attention to how the material is connecting.

Examples of tool-kit: Particularly in history classes, I find that drawing and keeping a timeline of the specific time period throughout the whole course can be helpful for contextualizing the different events we would read about. For psyc studies, maps of the important parts of the study can help me visualize the study more effectively.

1.8: Making Connections

In addition to study habits and repetition discussed on the previous pages, making connections (to other texts or resources, to your own life, to the world in general) to the material is essential to both short-term comprehension and to long-term recall.

Simply, not everything we perceive makes it from our short-term memory to our long-term memory.

Generally, this "decision" is one of the functions of sleep -- some things make it to long-term memory and are strengthened, while other things are forgotten and pruned away.

Typically, the things that make it to our long-term memory are things we

- a) have a strong emotional response to
- b) have lots of (spaced!) repetition with
- c) have a lot of connections to/with

A) Emotional Response:

For a strong emotional response example: I can't tell you much about my commute last week (or really even this morning). What kind of car was I behind? Which stoplights did I get stuck at? No idea... However, I can tell you with pretty vivid detail what the car looked like that I almost rear-ended when traffic abruptly stopped near 75th Street/69 highway on I-35 many years ago! That intense emotional response burned that image into my mind!

For another example, I can't think of the car I was behind today... but, if I pulled in behind a Ferrari, I'd probably remember it -- I'd have a strong emotional response (i.e., that car costs more than my house! etc.) that I won't have when I pull in behind a "regular" car. [similarly, I might notice if the car was the same make, model, and color as my car]

It's difficult to have a strong emotional response to everything you will learn in college (and probably not favorable anyway -- that'd be exhausting!). However, making connections is something you can do more readily, no matter your personal preferences.

B) Repetition:

[SPACED!] Repetition is a good study strategy and is important to long-term recall (as discussed on the previous page about remembering and forgetting curves). However, repetition takes a lot of time and isn't generally very fun... In addition, repetition on its own isn't always enough.

C) Making Connections:

Have you ever missed a question on a test that you were sure you studied for (with repetition)? Even worse, you can remember the answer later after the test when you go back to your study materials? Frustrating experience, right!?

Often, this happens because you only created one connection to that material and then repeated that one cue many times -- you can only remember that material with one cue. If the question doesn't ask it in the same way/use that cue, you are unlikely to recall the material in the stressful testing environment.

Our brains are highly "plastic," meaning they change over time -- they rewire as we have experiences. The more you can embed that new piece of knowledge to multiple different neural pathways (connections), the more likely you will get a cue that leads you to the correct memory (piece of info for the test).

My example for this is with smells and sounds. For many people, we have specific sounds (for example, specific music or songs) or smells (for example, foods) that connect strongly to specific memories.

For me, there is a specific tomato pasta sauce smell that whenever I smell it I am transported to my grandmother's house. It's not a choice or a thought process -- I don't smell it and then consciously think, "hey this reminds me of grandma" -- I smell

it and think about grandma almost unconsciously. The neural connection between that smell and my grandma is so strong, it happens automatically. We want this to happen with school learning! [Note, I also have an emotional response/connection that strengthened that neural network that we won't always have with school... but the principle is still valid that memories form best when we make connections to our prior knowledge]

Whenever I read, ***I'm trying to embed the new knowledge into what I already know*** -- how does this info fit into the other info I've learned in the course? How does this compare to what I learned in HS/other classes? Does this reflect my own anecdotal experience?

Connection to Chapter 2

In our next set of lessons, we are going to learn about a strategy ("previewing") that will help you to ensure you are making connections to the material you are reading (making it more likely that the information will transfer to your long-term memory AND making it more likely that you can recall the info even if the "cue" is not the exact same on the test).

1.9: Optional Topics Students are Sometimes Curious about-Multi-tasking and Listening to Music While Studying or Reading

Multi-tasking

In short, humans don't really actually multi-task.

Instead of multi-tasking, we are really actually "task-switching" rapidly.

Every time we task-switch, we are increasing our "cognitive load" and generally decreasing our performance on both tasks.

Different research finds different effects, but they are pretty stark -- a 40% loss of productivity is often cited.

In general, as the task is more cognitively demanding, the more detrimental the cost of task-switching/multi-tasking is.

On simple tasks (really, tasks that have become simple for YOU), we can reach "automaticity" -- this allows us to use such a low part of our "cognitive load" that we can still be effective doing more than one task.

Examples:

- Reading!
 - When you first start reading, you first spend a LOT of cognitive load on decoding the words/sounding out the words. If you read with a young kid, you'll probably notice that if there are a lot of words they have to slow down and sound out, their comprehension goes down even if they can successfully sound out the words. After they get to the end (or a natural stop like a comma) of the sentence, they probably have to re-read the whole sentence now to go for comprehension. Most readers can't do both the decoding and comprehension process at the same time -- too high of a cognitive load.
 - However, as you become more "automatic" at decoding, you spend less "cognitive load" on it and you can decode and comprehend in one read-through.
- Walk, talk on the phone, and chew gum at the same time! Am I a multi-tasker?
 - Can a toddler successfully do these things? Probably not -- it's only as these tasks became easy/automatic to me that I can do them all at once.
 - However, if I'm trying to do all three at once, if anything about the environment changes (i.e., a step I don't expect, a stick in the walkway etc.), I am MUCH more likely to trip, stutter, or choke on my gum if I am doing all three things vs. only paying attention to where I am walking.

Next, when your focus is interrupted, most studies find it takes the average person SEVERAL MINUTES to get back into "flow." During that time, the interruption/distraction seems to linger and still steal away some of our cognitive load.

So, when you get distracted by that text message and think, "oh, it's ok, it's only 15 seconds of lost productivity!"... that's probably not correct -- you probably are having multiple minutes wherein you aren't fully back to focusing on the task.

Listening to Music while Studying or Reading?

In short, there is a LOT of argument about this and there is not a perfect answer to the general "Should I listen to music while _____?" question.

There is simply too much variability between tasks and learners to make a blanket rule about this.

However, I would first note that in many studies, they find that while many students think it helps and prefer to do it, the results were often not aligned with the preference.... Aka, many students who think music helps them aren't actually correct -- when they were forced to study material without music, they did better...

As you read this/we discuss this idea in class, keep that in mind -- don't fall victim to "confirmation bias" (that you only pay attention to the ideas that support your already established opinion and discard the evidence than disagrees with your opinion).

In general, for most learners in most situations, music is generally **not** found to be **beneficial** and **is often found** to be **detrimental**.

In most studies on this topic, they use a general framework of "working memory" and/or "cognitive load." This is somewhat similar to the ideas we're discussing about multi-tasking (i.e., that humans don't actually multi-task -- rather, we task-switch, often quite rapidly and this switching takes part of our "cognitive load").

Basically, attending to/listening to the music/processing the lyrics and music takes some of our "cognitive load."

When we are doing language intensive tasks, lyrics in particular seem to compete with the reading/writing task.

Conversely, on repetitive, simple tasks, music can be a motivational and help reduce distractions. Music can help put us in a positive mood and help us feel "good" --> which has a whole host of benefits for learning (think about our mindset discussions/lectures).

In fact, a lot of the positive results of music haven't been able to separate from other positive-feeling-inducing activities before the task/or during breaks in the task or even as a post-task reward. So, it's possible all the positive results are really just that music makes us feel good!

So, what about music without lyrics? White noise or rain/nature sound machines?

Research is pretty mixed... Honestly seems to somewhat depend on the individual and the task that individual is doing. It appears to even change in a hour to hour or day to day manner in some research.

Other Tips:

Most research finds the following:

- lower volume is generally better
- try to have a service without ads -- when the ad pops up, it generally lowers productivity/lowers focus on the task
- we don't usually want songs we have strong associations or feelings about
 - e.g., I have songs that when I hear them, they transport me to that time/space of my memory... am I still reading my textbook effectively if I'm thinking about that memory?
- Generally stronger positive effects with more "natural" human register music vs. experimental electronica or similar.

My personal opinion:

If I'm reading or writing, particularly something "dense," music seems to hurt more than help.

If I'm doing something that isn't very intellectually demanding (e.g., verifying submissions, copying scores on a MC test into the gradebook), and particularly on low-motivation days, some positive, low lyrics music that I'm generally already familiar and enjoy with is my go-to. It does seem to help me stick with the task longer and feel better about doing the task.

Think about when you are at the gym -- what kind of music helps you there? Why? You want the same for studying -- am I trying to calm down and focus? Do I need a "pick-me-up?" (I'd recommend taking a short break rather than playing a song, but it can and does help in some research!).

2: PRIOR KNOWLEDGE, PREVIEWING TEXTS, AUTHOR'S PURPOSE, PATTERNS OF ORGANIZATION

2.1: Chapter 2 Goals

2.2: Prior Knowledge

2.3: Previewing Texts

2.4: [Optional] Resources and Ideas for when I have Low Prior Knowledge

2.5: Questioning

2.6: Author's Purpose

2.7: Patterns of Organization

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2.1: Chapter 2 Goals

In Chapter 2, we are primarily looking at how to set yourself up for success **BEFORE** you begin reading. We've discussed the idea that Reading is a Process, and not an activity in Chapter 1. For many students, they simply open to page 1 of the assignment and start reading... Research finds this isn't actually the most efficient way to read. So, in this module, we will focus on skills and strategies you should use to help make it more likely your reading experience will be successful.

- Explain how prior knowledge affects comprehension.
- Explain how to access prior knowledge and/or build up background knowledge when necessary.
- Explain why we should do previews.
- Compare and contrast previewing methods.
- Demonstrate previewing methods.
- Explain how author's purpose(s) influence how we read
- Identify common patterns of organization
- Compare and contrast patterns of organization
- Demonstrate how patterns of organization influence your reading process at all three stages

2.2: Prior Knowledge

In many pieces of research, they have found that a reliable predictor of how well you will comprehend a text is **how much prior knowledge you have about a topic**.

Think broadly about prior knowledge -- it's not just the literal knowledge (who, what, when, where) and vocabulary, but also things like exposure to that style of writing, the typical formatting, patterns of organization, sentence structures, the way an argument is formed in that discipline etc.

For online courses, here is a video version of the activity we do in class. Note: required: 0-5:25 and 8:51-11:52; optional additional example: 5:26-8:50

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[After Video:] Notice how your prior knowledge did/didn't help you with the jargon (specific vocabulary for the discipline) and overall comprehension of the text.

If I included text features (e.g. titles and subtitles; bolded/highlighted/differentiated vocabulary with a glossary or footnotes; a graphic, picture, or visual aid that represents ideas of the text etc.), how would previewing have aided your comprehension on the first read through? With that idea in mind, let's move on to previewing.

2.3: Previewing Texts

As part of the reading process, research is **overwhelmingly supportive** of completing a "preview" of the material before you read.

Why should I preview?

Previewing the material has several benefits:

- Aids your focus
- Activates your prior knowledge/schema
 - increases long-term retention by increasing the likelihood you will make connections with the material
- Identifies your purpose for reading
- Identifies the author's purpose and/or the pattern of organization
- Increases reading speed
 - less re-reading
 - more likely to be able to skim and scan effectively (if necessary/applicable/advisable -- previews are a good way to aid in that decision making process too!)
 - in many studies, the preview group actually finishes the whole task (e.g. preview, read, take quiz/write summary) more quickly than students who simply start reading (e.g. read, take quiz/write summary)
 - even though it feels like an "extra" task, the research generally finds previewing to actually be time-saving

While it sometimes might feel a bit contrived, setting a specific purpose for your reading (**during the preview**), examining the author's purpose (**during the preview**), and then having a "dialogue" with the author (**by creating questions during the preview**) can help to increase curiosity -> increases your overall emotional response -> increases likelihood of transfer to long-term memory. Even this "fake" curiosity seems to have positive effects on comprehension and long-term retention. It will likely feel odd at first, but as you practice it more, it will become more natural.

Ultimately, at the end of my preview, I typically want to have an "advance organizer." As you will see in my examples below/ examples I make about your textbook when we work together, I am able to set up my notes before I begin reading. Later in the note-taking modules, we will discuss ideas about note-taking being a process (not an activity), and how I don't take notes the same way for every text -- I treat my note-taking strategies like a toolbox; some note styles are best for certain types of texts. Knowing this, it's totally ok to change note-taking formats after your preview. I often will start with a broad map of the general ideas I learn from my preview. However, I might not fill in that map while reading (another format might be better). That map was NOT a waste of time; I now have a fantastic study tool that shows the main ideas --> I can use this to self-test! Can I explain or fill in the details of that map after reading?

How do I preview?

- Read the Title
- Check the author, source, and publication date
 - consider the author's purpose for writing
- Consider your purpose for reading/how the material relates to the rest of the class materials
- Read/skim the introduction or abstract
- Read headings and subheadings
- Read/skim the 1st sentence(s) of each section
- Read/study the vocabulary or jargon the author has emphasized (often **bolded** or *italicized*)
- View the graphics and/or pictures and their captions
- Read the summary (if included)
- Look for the pattern of organization

Now, do I do every single bullet point, every single time, in that exact order? **NO!!!**

Some Previewing Systems

In general, there's no one perfect previewing system. I encourage you to check out the different models and try different ones. You might find that one works best for you. You might find that which one is best varies and depends on the text too!

- [OER textbook](#) [openoregon.pressbooks.pub]
- [Previewing checklist.docx](#)
- [PILLAR for unfamiliar texts.docx](#)
- [PLAN Previewing strategy.pdf](#)

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Examples

In general, I recommend that you practice this with me during an active visit -- this will be more beneficial if you see me model on your textbook rather than a random chemistry and history text (both are from other JCCC courses, but you may or may not actually take that course!).

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2.4: [Optional] Resources and Ideas for when I have Low Prior Knowledge

In the previous page in the video examples (or when we did the examples together, I likely discussed what I do when I have low prior knowledge -- remember, if I can't make any connections to my schemata/prior knowledge, it makes remembering the material much more difficult! So, when I have low prior knowledge, I usually will try to look at lower level resources on the topic first).

Briefly, adding terms like "edu" or ".edu" or "k12" or other education related terms *usually* will help you find school district resources (which will both [generally] be credible AND at a slightly lower level [which will be good to help build background before reading the higher level college text]).

Sometimes, it can even be beneficial to add the names of local school districts or the school district you attended. Some local districts also have resources built for their students already -- these are often called "enrichment" resources. You could also search for "home school" resources, *but* be aware that the quality varies drastically across different resources and frankly, some of those home school websites I have reviewed contain ideas I would classify as misinformation (particularly in the sciences (especially biology -> topics like evolution) and history (especially surrounding issues like slavery and imperialism/colonialism...)) -- just be wary and use credibility tests! [there is an optional module on credibility tests in our canvas course]].

Here are just a couple of examples of the types of good resources I'm talking about:

- [Khan Academy \(opens in new window\)](#)
 - Khan Academy is great free resource with courses in most subjects. Their videos are typically well done and the content is at a lower level than the college textbook. Sometimes, completing the unit in Khan Academy before reading will end up saving me time and frustration when I have very low prior knowledge. Even better, I could complete the entire Khan Academy course over the last few weeks of summer/winter break before the class begins!
- [KCPT PBS Crash Course \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#)
 - similar to the Khan Academy content/layout
- [Omega Learn \(opens in new window\)](#) and [We are Teachers Links to an external site \(opens in new window\)](#) and [Concord.org \(opens in new window\)](#)
 - Websites like these don't really have much content on them. Rather, they link you to other high quality content sources. These are usually tax-exempt educational organizations that help vet and find the high quality resources for teachers to use in middle schools and high schools. The resources they link to are great for building up your background knowledge.
- [KCPT PBS Subjects \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#) is particularly good and covers most subjects
 - - Physics: [physics \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#)
 - history: [history \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#)
 - Shakespeare: [Shakespeare \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#)
 - Sciences: [Sciences \(opens in new window\) \[kcpt.pbselearningmedia.org\]](#)

Olathe School District and Library Resources (I live in Olathe -- I'm sure the other area districts also have pages like these)

- [Olathe Public Schools Parents as Teachers \[www.olatheschools.org\]](#)
- [Olathe Library Parent Resources \[www.olathelibrary.org\]](#)
- [Olathe Public Schools Community Resources \[www.olatheschools.org\]](#)
- [Olathe Public Schools Family Guide \[www.olatheschools.org\]](#)

There really are so many great resources out there! These are just some good ones that I happen to know about -- this isn't meant to be an exhaustive list or that resources I haven't listed aren't good or anything like that.

This page titled 2.4: [Optional] Resources and Ideas for when I have Low Prior Knowledge is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by Peter Mancini.

2.5: Questioning

Interactive Content

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[View this Interactive Content online](#)



That video really does a good job of going over the general idea of questioning before, during, and after reading.

At this point, it really is just practicing it more and being intentionally metacognitive -- after you do a reading, take a minute to look at your preview, annotations, and after reading work -- what questions did you ask? Are they all basic "w" questions (i.e., who, what, when, where)? Or do you get into specific questions for the author? Do you track the author's purpose? (asking "what's the purpose of this section?" "why does the author include this here -- why does it have it's own section? etc.). Are you able to find the answers to the questions as you read on?

Another good resource to check out for help with generating better/higher level questions, is [Bloom's Taxonomy \(see Chapter 1\)](#). Check out the verbs used in those graphics. Try to ask questions using verbs from different categories. It might also be helpful to re-check out some of the earlier metacognition pages from Chapter 1. (such as [Metacognition and The Reading Process](#))

2.6: Author's Purpose

Most research divides "Author's Purpose" into 3 categories:

to Inform

The author is simply giving you information. The text is primarily fact-based to explain a topic. Your general purpose is to learn about the topic from this presumed expert. [note: these are often also called "expository" texts]

to Persuade

The author is trying to change your opinion or your behavior. The author will make a point/argument/thesis and support it with evidence. Your general purpose is to decide if the author's evidence is *relevant* and *adequate* enough to change your opinion/behavior.

to Entertain

The author is trying to amuse and delight you. The author will try to make you want to "come back for more." Typically, the author is trying to exhibit emotional responses from the reader. Your general purpose will vary greatly -- it could simply be to allow yourself to be "taken along for the ride" or it could be more academically inclined analysis of the themes or author's style.

Interactive Content

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2.7: Patterns of Organization

I begin looking at the Pattern of Org before reading during my preview, then the pattern of org influences the way I choose to take notes, and finally, I use the pattern of organization to help me study more effectively. So, although this is being introduced in the "Before Reading" part of the course, please keep in mind that this knowledge will be used throughout the reading process.

Why Should I Care About Patterns of Organization?

[Why should I care about Patterns of Organization.pptx](#)

[Optional, do this in person with me!] [Why Patterns of Org Matter, Alternate Example.docx](#)

How high can you find the numbers in sequential order in 30 seconds? Then, after I show you the pattern of org for this list, see how many more you can find in that 1 minute!

Common Patterns of Organization in College Texts

Note: There are MANY different models of patterns of organization. However, while the different models do utilize different terms, they generally all have the same big ideas.

Table Resource:

Patterns of Organization with Characteristics and Common Transition words used

<u>Pattern of Organization</u>	<u>Characteristics</u>	<u>Common Transition Words</u>
Addition, List, Illustration, Examples	presentation of more ideas that continue on the same line of thought or provide examples of that line of thought	for example, also, in addition, further, another, next, first, second, third, finally
Time/ Chronological/ Process	describes an event	first, second, third, next, then, after, before, while, during
Compare and Contrast	describes similarities and differences	Compare: both, alike, similar Contrast: however, but, yet, in contrast, despite, although
Cause and Effect	describes relationship between two things or events	therefore, results in, if... then, because (of), since
Problem and Solution	describes relationship between two things or events	therefore, since,
Spatial Order	describes physical location or position	above, below, next to, behind

Video Resource:

Interactive Content

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[View this Interactive Content online](#)



After I have found the pattern of organization, what strategies can aid comprehension?

As soon as I know the pattern of organization, I can better make sense of the text. One way I do this is with graphic organizers. Some graphic organizers work particularly well for certain patterns of organization.

However, please note, I personally am NOT in favor of using pre-made graphic organizers -- college level texts tend to not fit so nicely on pre-made graphic organizers. For example, a college level cause/effect text likely won't fit into the nice "1 cause with 3 effects" graphic organizer. Try to become more comfortable drawing it for yourself as the text warrants.

Drawing graphic organizers is a wonderful way to set up your notes before reading, to take notes during reading, and to study the material after reading. We will discuss taking notes and studying more later in the course. Briefly, when I use maps for studying, I will give myself some "cues" from the material (e.g., a heading from the textbook). Then, I will try and map out the material using the pattern of organization. Next, I compare my map to my notes I took while reading, paying special attention to what info I missed or was incorrect on. I write this in a second color -- now, I can very clearly see what areas of the lesson I still need to study more.

Resource: [types_of_graphic_organizers.pdf](#)

Compare and Contrast: t-charts, venn diagrams [image searchLinks to an external site.\(opens in new window\)](#) In this pattern, pre-drawn graphic organizers are typically helpful. In this pattern, *who?*, *what?*, *when?*, and *where?* are often as important as *why?* and *how?*.

Problem/Solution, Cause/Effect: [image searchLinks to an external site.\(opens in new window\)](#) Generally divides the page in half with arrows showing the relationships (e.g. causes on left half of the page with arrows drawn to the effects on the right half of the page). In many college level texts, these 2 patterns of organization mesh together. Often, the causes of a problem will be explained (making the "effect" into the "problem"); then, the author will offer solutions to that problem (e.g. causes -> effects which are also problems -> solutions). Typically, the problems discussed in college courses require some background knowledge and context about the causes of the problem in order to understand the solution. In this pattern, *why?* and *how?* are typically the most important questions. Because of this complexity and major differences between texts, you are often better off drawing your own map.

Time, Chronological, Process: [image search ProcessLinks to an external site.\(opens in new window\)](#) [image search chronologicalLinks to an external site.\(opens in new window\)](#) Good old timelines also work quite well for this. In this pattern, *when?* is typically the most important question.

Addition, List, Illustration, Examples: "traditional" [concept mappingLinks to an external site.\(opens in new window\)](#) works well. These texts vary so greatly that making your own map is likely the best choice. The important questions will vary based on the text (*who?* *what?* *when?* *where?* *why?* *how?*).

Spatial Order: "True" visual representations are typically best here. Spatial order texts typically include visuals of the objects already. Previews are particularly useful for examining those visuals prior to reading. *Where?* and *how?/why?* are typically the important questions.

Please note: All the basic questions (*who?* *what?* *when?* *where?* *why?* *how?*) matter for most texts; however, you are more likely to see test questions about particular ideas based on the pattern of organization.

3: VOCABULARY STUDY

3.1: Chapter 3 Goals

3.2: Vocabulary Theory

3.3: Improving and Studying Vocabulary

3.1: Chapter 3 Goals

- Describe how we learn new vocabulary
- Compare and contrast different vocabulary learning methods
- Demonstrate both receptive and productive vocabulary learning and study methods

3.2: Vocabulary Theory

We've already detailed how your prior knowledge affects your comprehension in chapter 2. One part of "prior knowledge" is both your general vocabulary knowledge and your vocabulary knowledge specific to that text/discipline/subject.

3-Tier Model

Most research divides vocabulary into 3 types. I find this model useful when deciding what vocabulary to study:

- Tier 1 -- common, everyday words
- Tier 2 -- high-frequency academic words
 - words that are "academic" yet "cross-over" into multiple domains (content areas/subjects)
 - analyze, cite, evaluate, interpret, legislate, sector, conduct, conclude, table (as in data)
 - All of the above words are common in various academic areas, yet we probably don't use them very much in our day-to-day conversations -- you can probably quickly think of "tier 1" synonyms of each of these words that you use in day-to-day speech
 - "Header"
 - different meaning in general reading (most texts have "headers" and "sub-headings") vs. the usage in soccer (tier 3, specific to that sport/domain)
- Tier 3 -- domain specific academic words
 - "academic" words that DON'T cross-over into other domains OR have a *different meaning* when they cross into other domains
 - "Force"
 - different meanings based on the domain -- "force" means something different in a physics class than it does in my "tier 1" everyday language
 - "Isotope" "proton" "electron"
 - very specific scientific meanings; of generally little use outside of that context
 - "closer" in baseball
 - specific meaning to the sport vs. general usage
 - "supply" "demand"
 - specific usage in economics (possibly actually tier 2 -- basic econ has application in many other areas, but I might just be biased as a former social studies teacher!)
 - Also called "**jargon**"

Think back to that prior knowledge activity (washing your clothes) -- lots of tier 3 "jargon," right? Texts very quickly become incomprehensible when you don't know the vocabulary. Research varies, but even not knowing just 10% of the vocabulary in a text can make the text incomprehensible. Pick any reading and delete every 10th word -- can you still read and understand it?

In fact, most research finds the correct level of difficulty ("n+1" wherein "n" is your current knowledge) to be 95-97% of the words are known -- below that and it's tough to learn; above that and there just aren't enough new words to really expand your vocabulary.

Especially in college-level texts, one word can change the meaning of the paragraph quickly -- it's important to know the vocabulary.

Receptive vs. Productive Vocabulary; Exposures to Vocabulary

Researchers also tend to divide vocabulary into "**receptive**" vs. "**productive**" vocabulary.

Simply, "receptive" refers to the vocabulary you comprehend when you read or listen (when you "receive" the word).

"Productive" refers to the vocabulary you can "produce" on your own (speaking and writing).

Generally, your "receptive" vocabulary is significantly larger than your "productive" vocabulary. With repeated exposure to and study of the vocabulary, a word moves from unknown -> receptive -> productive.

Simply, **it takes a lot of exposure for a word to enter our "productive" vocabulary.** Unfortunately, the research is really all over the place with lots of varying arguments when discussing "exposures," but a lot of the research cites 10-30 in-context exposures for a word to become part of the receptive vocabulary and another 10-30 in-context exposures for it to become "productive" vocabulary.

Part of the problem with vocabulary research on these topics (which makes it difficult to draw generalizations about vocabulary study) is the definition of "exposures." What exactly counts as an "exposure?"

Well, different research defines it differently. If I make flashcards and review the flashcards 3 times over 72 hours, is that 1 exposure or 3 exposures? The answer depends on the researcher, and I personally see validity for both arguments: a) you've exposed yourself to the word 3 times spread out enough that it will help combat that "forgetting curve"; b) on the other hand, you've really just repeated the same activity... is that actually a novel, new experience and exposure? Have you actually drawn any new neural pathways or connections? Maybe not... You've strengthened the existing connections, but you probably haven't made new ones.

This helps to account for the large discrepancies, or differences, in the required number of exposures found in research. (See what context clue I just gave for the word "discrepancies"??? See "context clues" in the next section for more info! Based on the context around it, you should be able to tell the definition of "discrepancy")

In Context vs. Out of Context Vocabulary Learning

In-Context vocabulary is vocabulary that you learn in "authentic" language settings (i.e., reading, listening). Here is an overall good video from Khan Academy about using context clues to help learn vocabulary in-context. Note that different sources will have different types of context clues (most lists have 4-7 general types of context clues). Try to do a quick internet search on "types of context clues" and read through a few sources to see the similarities and differences between the sources. Personally, I like the IDEAS framework they use in this video -- those 5 types are pretty standard and it's packaged in a way that is easier to remember (a mnemonic device).

YouTube Video

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[View this YouTube Video online](#)



Generally speaking, we learn most of our vocabulary in-context. Think about how small children learn their first language. There's very few, if any, word lists or looking up words in a dictionary -- nearly all humans naturally learn new words by being exposed to them in their day-to-day interactions and readings. [This is one of the many reasons that simply reading MORE texts from varied sources is one of the best ways to improve your vocabulary]

Here is another potential resource about context clues (note, that many of these examples are at a "low" level (i.e., elementary school), but it might be valuable to see some examples with words you already know -- there are some higher level examples from high school (one uses Shakespeare for example) available lower on the page: [K12 Reader Resource](http://www.k12reader.com)(opens in new window) [www.k12reader.com]

Common mistake: I often see students immediately stop when they come to a word they don't know. Don't stop! Keep reading the rest of the sentence, at minimum. In general, I typically advocate that you read until the end of that paragraph. Sometimes, I even will see what the next paragraph seems to be about before stopping to look up vocabulary.

Why? If you stop as soon as you get to the word, you aren't giving yourself a chance to use context clues. The context clues often come AFTER the word and textbook authors try to anticipate words the reader might not know and include a context clue to help the reader. In some cases, the next paragraph will give examples of that concept. All of that would help me to learn the word in-context and allow me to keep my fluency and flow. Note: This requires high levels of metacognition -- you must pay attention to if you end up learning the word -- there won't always be a context clue... sometimes, I still have to look words up in the dictionary

or glossary. That's ok and totally normal! Context clues aren't a magic bullet for every vocab word.

Out-of-context vocabulary learning, on the other hand, is typically reserved for words that aren't common enough to learn through in-context exposure. Think of vocabulary lists, the glossary, the terms listed at the beginning of the chapter etc. The author chooses those words to differentiate on purpose! Pay attention to those words before you begin reading during your previewing stage!

When you are learning new vocabulary, it is also often important to note the concepts of **Denotation** and **Connotation** which are often important in understanding the overall tone and meaning of a text.

Connotation vs. Denotation

Tone: *the writer's attitude towards the subject and/or the audience.* There are many long lists of tone adjectives.

To find tone, we must look at the author's **word choice** and **potential bias**.

Simply, ALL texts will have some **bias** -- not to be too philosophical, but it's simply impossible to fully remove the lens through which we view the world -- our culture and experiences will ALWAYS somewhat bias us. Bias isn't automatically bad (even though we tend to use the word negatively more often than in a neutral or positive "connotation"). Bias is a natural part of the human condition.

However, it's important that we recognize the bias (of both the author/text and our bias as a reader) and think about how that bias might affect the overall text and our understanding of it. Frankly, reading multiple (differently) biased texts, along with less biased authoritative texts, about the same issue can help give a deep understanding of the complexities of real-world issues. I often try to read a fact-based report from somewhere like apnews or reuters, then move to a slightly liberal opinion piece (I personally tend to use *New York Times* and/or *NPR*) and then a slightly conservative opinion piece (I personally tend to use the *Wall Street Journal*) about the topic. After reading all 3, I feel confident that I have a good understanding of the issue. Allsides.com is a great place to practice these skills in their "headline roundup" area of the site -- they essentially find three articles from differently biased sources about one topic. Pay attention to what is different in each article --> this will help you analyze tone and bias.

Word choice is one of the ways that a reader can infer the author's *tone* and possible *bias*. In short, there are nearly unlimited ways to say the same idea/describe the same event/idea/thing. There are nearly limitless adjectives we can use (most words have MANY synonyms with only slightly different meanings), nearly limitless grammatical structures we can use, many different styles we can write in etc. When researchers ask groups of people to write about the same event or item, even when they get very large n (participants), it's amazing how different each individual piece of writing will be, even though it's about the same thing!

When I am trying to figure out the bias, I need to figure out the tone. To figure out the tone, I need to pay attention to the author's word choice. (Note, I do this when I am the author too!)

When discussing author's word choice, the reader should think about **connotation vs. denotation** and other possible word choices the author could have made. What other words could the author have used? Would those other words change the connotation? What does that say about the author's bias?

Connotation: The "feeling" of a word

Denotation: the literal meaning of a word

Examples:

"Youthful" vs. "Childish"

Call your grandma "youthful" and see how happy she is.

Then, go ahead and call your other grandma "childish" and see what happens. **IF** you survive, you'll know the difference between connotation and denotation

"Pig" "Cop" "Policeman" "Police Officer"

All 4 denote the same career.

"Pig" is a negative slang connotation [While 100% legal and protected by the first amendment, I would not advise calling a police officer a pig... I would know a lot about the author's perception of the police if they use this term]

"Cop" is a generally neutral slang connotation [unlikely to be found in any formal writing, likely reading something informal]

"Policeman" is generally positive and more formal; however, it is outdated because it is "gendered" [Even though I might not learn about the writer's opinion overall with this, I can guess it is probably an older text or written by an older person] [for another example, think "fireman" vs. "firefighter" -- in general, you are unlikely to see "fireman" in current formal texts. The preferred term today is firefighter because it doesn't imply gender -- link to our fire science page to see: [JCCC Fire Services Catalog Page](https://catalog.jccc.edu)(opens in new window) [catalog.jccc.edu]]

"Police Officer" is the current formal term

"Thrifty" "Frugal" vs. "Stingy" "Miserly"

All four words have very similar "denotations:" using money sparingly, saves a lot of money

However, the first two are generally positive, while the latter two are generally negative in terms of connotation. Calling someone "thrifty" would usually be taken as a compliment. Calling them "stingy" or "miserly" would be an insult.

"Torture" vs. "enhanced interrogation techniques"

What's the difference? One is illegal... the other isn't.

For example, if I am reading something about Guantanamo Bay, I can learn a lot about the authors' bias and point of view based on which word they use to describe how the prisoners are interrogated. [e.g., what are their thoughts and opinions about the CIA and the US's War on Terror? I can probably make a pretty accurate guess based on which word they use...]

collateral damage vs. non-combatant deaths vs. civilian casualties vs. civilian deaths vs. murders of civilians

"Collateral Damage" is in general a very "detached" and "unemotional" and "non-blame-seeking" way to say that civilians died. On the other side, a phrase like "murders of civilians" is more likely to tap into an emotional response AND is very clearly laying blame on the people who killed the civilians.

Protected vs. Sheltered

die vs. went to a better place vs. rest in peace (we use MANY different words and phrases that kind of "take the edge off" of death -- make it sound like less of a bad thing to hopefully make the person grieving not feel so bad)

"Proud" vs. "Vain" or "conceited"

Again, similar "denotation:" something about being happy/satisfied with your accomplishments or appearance

However, the first is generally positive or neutral while the second two are insults.

An "argument" with my spouse is a negative (synonyms, feelings: fight, disagreement, angry). An "argument" in my English class is not negative or positive (synonyms, feelings: persuade, convince, logic, defend, sell).

When should I learn the highlighted/bolded/italicized out-of-context vocabulary?

Well... frankly, there isn't a perfect answer to that question. Thinking about what you just read above, there is a preference towards learning the new vocabulary in-context (i.e., learn the vocabulary as it comes up in the text.). However, this can have a negative effect on your fluency (and comprehension), particularly if there is a *lot* of new-to-you vocabulary. Every time you have to stop reading to learn a new word, that costs you time AND it interrupts your fluency and "flow." Typically, when you lose your "flow," it takes people several minutes to get back into 100% focus and reading fluency. [distractions don't end when the distraction stops -- there seems to be a longer detrimental effect for several minutes after the distraction stops]

So, in general, if I'm having to stop to look up words every minute or two, I am going to stop reading and try to pre-learn the

vocabulary. This pre-learning of vocabulary (similar to the idea of building background knowledge using the PILLAR previewing strategy) will probably end up actually saving me time AND will increase my comprehension AND will likely increase my enjoyment of reading that text (stopping every couple minutes to look up a word is not a fun way to read for anyone -- it makes reading a laborious slog).

If I'm reading a text that I know I will struggle with (i.e., when I do my preview strategy, I recognize I have low prior knowledge etc.), I might make the decision to pre-learn the vocabulary before I even try to struggle through reading the text.

Alternatively, some disciplines are simply very jargon heavy -- there are some disciplines that pre-learning the vocabulary will be beneficial, even if you have high prior knowledge (e.g., I'm thinking about courses like Medical Terminology, Anatomy etc. Courses that, just by the nature of the course, have TONS of new-to-you vocabulary).

Basically, I almost always try to learn the vocab in-context while I read. When that is not working (or that I believe it's unlikely to work based on my preview), then I will learn the vocab out-of-context before I read.

Again, most research finds you will best learn vocab in context when you know ~95-97% of the words in the text. 3-5% unknown words will usually leave enough context for you to learn from. Above that and you will likely struggle to learn new words in context in that specific text. [average sentence length in college textbooks is more than 10 words -- if you only know 90% of the words, there will be a new word in every sentence -- that's too much to learn in-context].

3.3: Improving and Studying Vocabulary

How can I improve my vocabulary?

First, let's recognize that it is not possible to know every word. It's just not. And, frankly, it's just not necessary!

- Depending on exactly how you define a word, there are maybe 500k English words – regardless of the exact count, it is simply not possible to know them all. Also, this changes over time as languages evolve. There are between 150k-200k in most major English dictionaries.
- Estimates vary significantly, but a typical adult native English speaker has a receptive vocabulary (know it when they see or hear it) of 20k-40k words and a productive vocabulary (use it in writing and speech) of 15k-25k words.
- Generally speaking, the most common words are VERY common – the top 100 most common words make up nearly 50% of all written material; top 1000-2000 most common words make up about 90% of all material. [again, these estimates change based on the exact study, but most are around these figures]
 - That doesn't mean you only need 1k-2k words though – some studies on newspapers, for example, have found that newspapers like the New York Times and Wall Street Journal have working vocabularies of around 15k-20k per year.
 - If you only know those top 1k words, you will very quickly find that college level articles put you below 90% vocab knowledge => you will struggle

With all of this in mind, how should I try to improve my vocabulary?

Context Clues/Read More

Practice, practice, practice. Hard to get better at something without doing it a lot! Simply, reading lots of varied texts, and reading every day has been shown repeatedly to boost vocabulary.

Personally, I use and recommend the following model:

- 20 minutes, 6 times per week
 - two sessions spent on current events/news [typically in the center, right, left fashion discussed in section 3.2]
 - two sessions spent reading a fiction novel of my choice [try to "level" this book so that there is some new vocabulary so I am challenged, but not so much that I don't still enjoy it and can learn most of the words in context]
 - two sessions spent reading academic texts in my area of study or adjacent areas of study [this is where I will practice the tier 3 vocabulary of my discipline and general tier 2 academic words]

While I'm reading, when I come across a word I don't know, I try to use context clues to figure out the meaning. I also write the word on my notecard I use as a bookmark, which I then put into a word document later (because it's easier to alphabetize). I review that list on a semi-regular basis to try to practice the words. If I come across a word that's already in my list, and I didn't know it again, I highlight that word/put a star next to it each time I see the word but still don't know it. Again, I can't learn every word -- it's just not possible and some words are uncommon and specialized enough that I might not actually need to know that word long-term. If I ever see it again (e.g., in ten years), it'll be ok to look it up.

But, if I've come across this word several times now (and didn't know it several times), it's probably worth taking time to memorize it. It's common enough in my readings that I should take the time to learn it if in-context isn't enough for me to get it.

Here is a chart version that might help you practice at first:

Word, Source with Page #, and Context	Context Clue and Hypothesis	Check the Dictionary and Reflect
(At minimum, provide the sentence the word is found in – however, depending on the usage, the sentences before or after might be needed)	Is there a context clue available? If so, which type of context clue are you using to help make an educated guess at the definition of the word? Then, what's your guess?	(What is the <i>complete/full</i> definition from a dictionary? I recommend copy/paste! Then, which definition for the word fits best in this passage? Why? How do you know? Finally, was your hypothesis correct? Close? Really far off? Reflect.

Word Parts and Word Lists

Just reading more and practicing using context clues is a great strategy and a great first step. However, the research is fairly clear that "wide reading" won't be enough on its own for most learners. You will at some point need to use other strategies and skills and/or identify certain words that aren't used often in everyday speech that you will need more exposure to in order to actually learn. Especially in college, you are going to come across words that are rather esoteric [can you use a "general sense" or "inference-style" context clue to figure out the meaning of *esoteric*? hint: previous sentence: "words that aren't used often in everyday speech" -- the definition from Oxford Languages is "intended for or likely to be understood by only a small number of people with a specialized knowledge or interest"] wherein you probably won't have enough exposures in text or speech to learn it in-context.

It can be good practice to study specific word parts or word/vocabulary lists.

- Speak with your professors to see if they have tier 2 and tier 3 word lists specific to their discipline, especially for the discipline you plan to major in
- Use the textbook glossary as a good place to start
- Word parts
 - English uses many Latin and Greek affixes. Knowing some of the common ones can greatly aid your context clue skills.
 - an internet search of "common word parts" or "common Latin and Greek word parts" or "common prefixes and suffixes" will turn up TONS of options.
 - ideally, use .edu and/or .gov sources! Lots of colleges and school districts have lists appropriate by grade level.
- Vocabulary lists
 - Similar to word parts, there are tons of lists of vocabulary out there you could practice with
 - SAT and/or ACT word lists are good options
 - Searching for Tier 2 word lists is a good option
 - you will likely get many results from different school districts; looking at their upper high school (usually it will be divided into grades 9-10 and grades 11-12 in most districts) lists can be good places to start
 -  [ELA from Albuquerque Public Schools](#)
 -  [Susan E Wagner HS in NY that covers many disciplines](#)
 - [Speech Therapy list\(opens in new window\)](#) is a very general by grade level list
 - None of these lists are "perfect" -- but, lists like these are often a good place to start if you have low prior knowledge/low vocabulary knowledge. Generally, I try to be more domain/subject specific when I look for lists like these.
 - Like something like [this\(opens in new window\)](#) for history
 - Or something like [this\(opens in new window\)](#) for biology
- Here are a couple sources (with both tier 2 lists and word parts lists) that could help get you started/show you what to look for
 -  [Source 1](#) from Kansas, doesn't have a word list on this document but has links to other example word lists/websites

-  [Source 2 from Berkeley school district](#)

Practice Materials

Townsendpress.net has a reasonably priced (\$12.90 for 10 months) [Vocabulary study \(opens in new window\)](#) that uses research backed techniques.

Study Tool: Flashcards

- Flashcards -- there is a reason flashcards have been around so long: they work! However, think back to the "exposure" idea. If you only expose yourself to the word in one way (word -> definition like on a traditional flashcard), you probably will struggle to remember the word in different contexts or use it in your productive vocabulary.
 - [Quizlet\(opens in new window\)](#) is one way to still be under the general flashcard umbrella, but it has you study the word in many different ways (listening, writing, games), contexts (multiple choice vs. free response) and directions (given word, give definition; given definition, give word). It's also just more fun!
 - Frayer model of flashcards
 - [An internet search.\(opens in new window\)](#) will quickly show many slightly different models, but generally they are all similar in that they are trying to increase the contexts in which you are memorizing and being exposed to the word. This method is especially useful for more "concept-level" words that don't have an easy or precise definition (e.g., the original Frayer model asks for example and non-examples of the concept). Activities like drawing a picture of it or using the word in a sentence are simply good ways to increase unique exposures to the word (increasing the chance you will remember it long term).
 - Generally, you divide the flashcard into 4 different areas
 - Some common areas for any discipline are the following:
 - Definition
 - Sometimes this is further divided: definition from dictionary AND definition in my own words
 - characteristics of the concept
 - break the word into word parts
 - use it in a sentence
 - draw a picture
 - identify other parts of speech of the same word (e.g., happy, happily, happiness) -- this is particularly useful for English Language Learners to get more comfortable with switching parts of speech
 - synonyms
 - antonyms
 - examples
 - non-examples
 - Don't feel like you have to limit yourself to that list though; for example, in a psyc source, when I'm learning about different theories, maybe I can make 1 box "Creator/Author of Theory and Time Period/Year Created". In a history course, maybe I make a box about the person's political viewpoints or affiliations or list major people or countries associated with a particular political movement/ideology. Be creative and **increase your exposures and connections to prior knowledge!**
 - Categorize your flashcards
 - If you are using physical flashcards, lay them out in a map format. Which words are connected? How do they connect? What categories could I make with the vocabulary?
 - The tangible moving of the vocabulary and the categorization activity will aid in long-term retention.
 - For example: in a psyc course, you might have a unit about the structure of the brain. I'll have flashcards with each area of the brain, major functions and activities, maybe some disorders caused by damage to specific areas etc. I could categorize them in that way first. Then, I could lay them out in their actual physical location in the brain. Then, I could put them in order of how the information goes from my eyes to my memory. Then, I could lay the disorders under the area of the brain they occur in. Then, I could categorize the disorders: maybe by which can heal vs. which are permanent or some other categories I come up with.
 - In a history course, I could do the same with people and terms. Who fits with what terms? Which terms fit together? What categories could I make? Can I make a timeline using the cards? Are they positive, neutral, or negative? Which are economic vs. political vs. social?
 - In an anatomy course, I might just lay out my flashcards in the shape of where they fit in the body. OR I might arrange the bones from biggest to smallest (is this likely to be a test question? NO; however, it still forces me

to interact with and show mastery of the material in a new way -> increases connections and improves neural pathways -> improves memory) OR I might try to use the Greek or Latin roots to arrange the body parts.

- Basically, don't get hung up on the idea that every study session needs to be a truly high level academic style study session -- **interact with the material in many different ways over many different short study sessions.**

Common Mistake: When using flashcards, the most common student mistake I see is one that leads to false confidence or over-confidence, which is very dangerous while studying! The student will read the word, then flip the card over and read the definition WITHOUT PRODUCING THE DEFINITION before reading it. Then, they are likely to say something like "ya, I know it!"... but... did they really know it? or did they just re-read it? In short, make yourself say it out loud or write it down BEFORE you flip the card. Self-test, don't just re-read.

Re-Read/Study Foundational Texts

Foundational texts (e.g., the texts used in a 100 level course) often introduce TONS of tier 3 vocabulary. If you are moving on to higher levels in that discipline, sometimes it can be a great idea to return to that foundational text over summer or winter break before moving to the next 100, 200, and/or 300 level courses. It's very likely the terms in the glossary of the 100 level text will be in the 200 level text (but they probably won't be highlighted/bolded because the author and your professor will probably expect that you already know them from the 100 level foundational course). The extra practice will ensure the words are in your receptive vocabulary, and ideally, this will help move the words from your receptive to productive vocabulary. Generally, in the higher level course, you won't just need to be able to recall the word when you see it (without any prompting or help from the textbook glossary!) -- the professor also generally will expect you to actually use (productive vocabulary) the word in your discussions and writings.

Note, another good option for this is the site khanacademy.

This is similar to the general idea we discussed about Prior Knowledge

Free Recall or Active Recall

First, it might be helpful to review what we learned about how we best remember information and set up study plans with short, repeated study sessions over time.

Have you ever had that phenomenon wherein you can't recall something on the test, even though you KNOW it was in your notes and you studied it? It's common -- don't worry, this doesn't just happen to you!

Generally, this phenomenon happens when we only "expose" ourselves to the vocabulary or concept in one way -- most often by just re-reading our notes/doing some basic flashcard work (as I describe above, flashcards are a good strategy even when they are used in the basic word -> definition way; there are just other things you can do to make them great instead of just good -- re-reading your notes is similar -- re-reading your notes is a "good" strategy -- however, there are some things you can do to improve it and make it a "great" strategy).

Rather than just re-read your notes or re-practice with your flashcards (even in the other ways I describe above), "Free Recall" or "Active Recall" is a great additional strategy to further improve your studying and make your study sessions more valuable. This strategy can be used with vocabulary and/or other types of information too. I build this idea into my overall study plans. There is more info and other examples of these types of studying in the next section below.

Free or Active Recall is the principle of recalling what you know, "free" of any aids.

Personally, I prefer to use a white board for this (it helps me get over the idea of not being perfect -- it's easy to erase and feels less permanent to me...), but you can totally just use a piece of paper or a blank word doc etc.

For vocabulary, I might give myself the list of words (*but, it can be even more telling if you start with a truly blank space "free" of any aids at all -- I and most of the research recommend starting with a truly blank space -- not even the word list!*) and try to write the definitions, draw pictures, makes connections, group the vocabulary together in groups that make sense etc. I'll basically just try to go through everything and anything I know about the words.

Then, I get out my list of vocab, resources I created (e.g., flashcards), notes, and the textbook glossary. How'd I do? This process

let's me very easily see what areas I am strong in and where I need to spend more time studying. This helps keep my study sessions short and focused on a specific goal (which we know from research are good things!).

As you do this process repeatedly over time, you'll both build up your new knowledge AND you'll strengthen your existing knowledge too! I try to space out the repetition with longer and longer breaks as time goes on. So, for example, over two weeks, I might set a schedule like this:

Study using free, active recall of vocabulary for 20 minutes on day 1, day 3, day 6, day 10, day 14.

As I go through those days, sometimes I'll add in the vocab from the new chapters etc. Over the whole course, I am repeatedly exposing myself to the vocabulary. Each time I do the activity, I should be able to "freely" recall more and more of the course vocabulary. By the end of the semester, this activity might take a long time, but it'll be exceptionally valuable to see if I am internalizing the vocabulary, transferring it to my long-term memory, AND will help move it into my productive vocabulary.

As a non-vocabulary study strategy, this is also VERY valuable.

The strategy as described above is a great way to start. Just start with a fully blank board/page and start writing what you know! Start trying to connect and group the items together. Start trying to draw smaller detail bubbles off the main concepts. Give examples. Ask and answer questions. Just interact deeply with the material! Then, compare that to your notes, the course outline on the syllabus, the textbook, etc. Sometimes, if totally free recall seems too tough to get started, using the Course Goals and/or Course Outline in the syllabus or the headings/sub-headings in the textbook is a good way to get yourself started. Those will give you the big topics without providing too many cues (like re-previewing the whole chapter or re-reading your notes would).

Here are some examples in different disciplines for how I've used or seen this techniques used:

In a history course, I might draw a timeline on the blank whiteboard -- fill in the timeline with the events in the unit/course -> draw lines off each event answering the basic W questions (who? what?) -> use color or symbols to group the events in some way (e.g., economic vs. political vs. social etc. OR something like democratizing events vs. "authoritarianizing" events OR strengthening of imperialism/colonialism vs. strengthening of the independence movement --- these categories will be very course and text dependent!).

In a psyc or sociology course, I might try to write the names of each major theory we learned about. Then, I'll draw lines off it for those W questions again (who created the theory? when? how? etc.). Then, I'll try to categorize or show the relationships between the theories in some way. I'll ask questions like: is theory B a later extension of theory A? or does theory B argue against or refute theory A? do A and B work together to make theory C? Can these theories be grouped under a broader umbrella (i.e., all of these are behaviorist theories while all of these are constructivist theories etc.).

Receptive vs. Productive Study Techniques

Receptive Study Techniques

These are study techniques wherein you "receive" the information. You are NOT "producing" any new content/study materials etc.

Some example of receptive study techniques are things like:

- Reviewing your annotations
- Re-reading your notes
- Going through flashcards
- Reviewing the professors PowerPoints or videos etc.

These are NOT bad study techniques. In fact, I encourage you to use these receptive techniques as ONE PART of your overall study plan. These receptive study techniques are a great way to increase repetition and strengthen those existing neural connections/memories.

However, they are NOT a great way to create new neural connections AND they often are not enough on their own. In addition, typically students will spend the same amounts of time on content they already know and content they don't already know while they are studying (when you should be spending considerably MORE time on the content you can't recall already and less time on stuff you already know).

Have you ever experience the following:

You study and study and study, but then when you get to the test, you can't seem to recall that info. It's really frustrating -- you are sitting there saying "I know I studied this; why can't I remember it!?!?!?!?"

I'd make a pretty large bet that you used only receptive study techniques. Then, when the professor asked about the concept in even a slightly different way than the way you studied it, you aren't able to transfer that knowledge to the new situation... because you never did that while studying.

Productive Study Techniques

These are study techniques wherein you "produce" new content while studying and/or use a more "self-test" model to study.

Some examples:

- Preview the chapter. After your preview, can you recall the important stuff? This will help you identify which areas you need more study AND it forces you to recall the info (you aren't just re-reading the info, you are recalling it from your memory in a similar way as you will on the test)
- Write the title of the chapter on a whiteboard. Map the chapter without looking back.
- Use the course syllabus -- see the course outline. Can you make a map or more detailed outline that explains the topics/ concepts in the course outline? Compare what you write to your notes and the chapter reviews (most textbooks have these today). What'd you miss?
- With a flashcard, rather than simply flipping to the back to see the definition, produce an answer first! Don't just read the word -> flip and read the definition.
- Teach the content to someone. See if you can explain the concepts to someone. See if you can answer their questions. This will help you figure out what you need to spend more time studying.

In general, when I am designing my study plans, I try to have early study sessions have a mix between receptive and productive methods and later study sessions focusing more on productive study methods, with less cues as I get closer to the exam.

4: ANNOTATING AND NOTE-TAKING

4.1: Chapter 4 Goals

4.2: Finding the Main Idea and Paraphrasing

4.3: Annotating

4.4: Taking Notes

4.1: Chapter 4 Goals

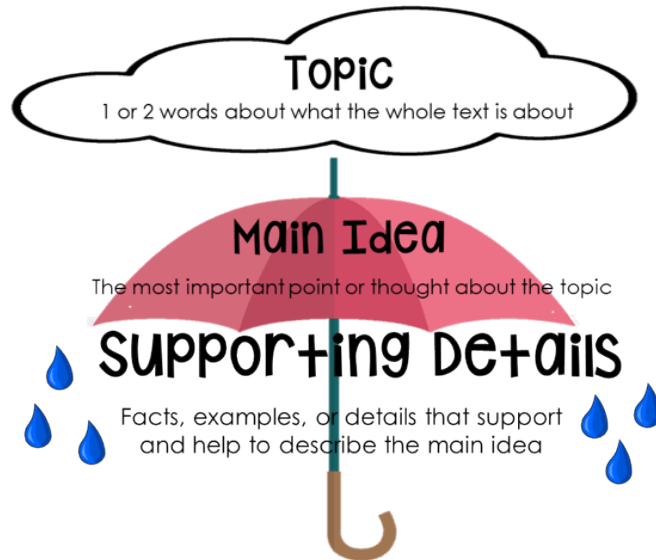
- Describe reasons for annotating and taking notes
- Compare and contrast annotating and note-taking methods
- Apply annotating and note-taking methods

4.2: Finding the Main Idea and Paraphrasing

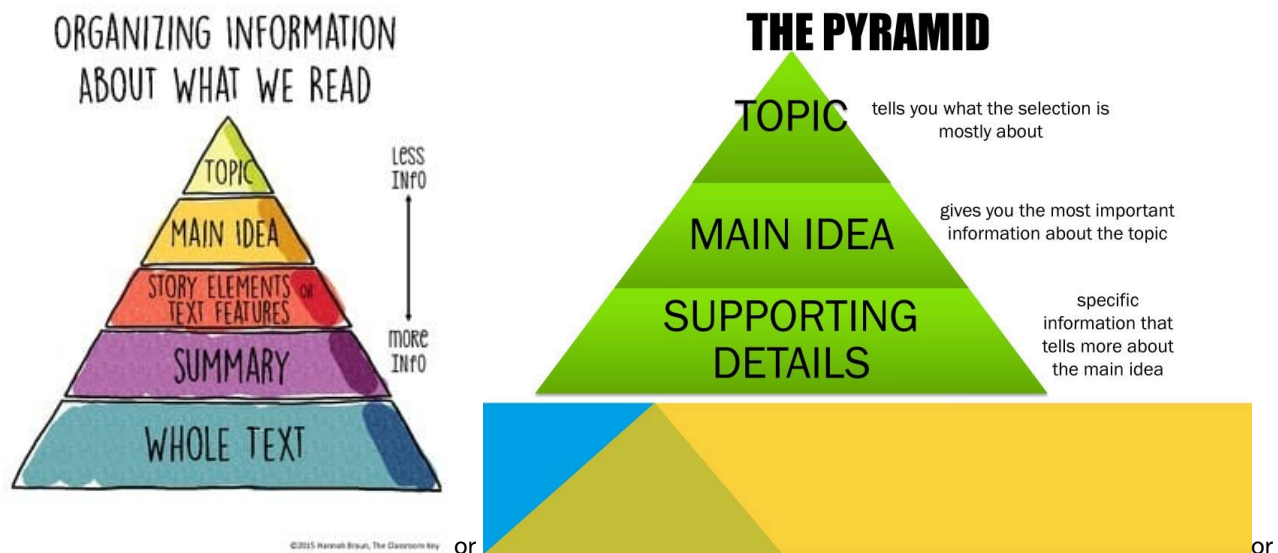
Optional: Finding the Main Idea

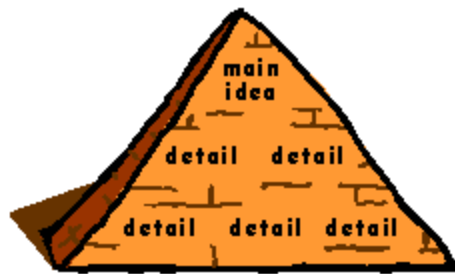
There are many different models of and techniques to find the main idea. Generally though, most use 3 common terms: Topic, Main idea, Supporting detail (often broken up into Major Supporting Details and Minor Supporting Details).

The Umbrella Model is pretty common:



Another common model is the pyramid:





Generally, the key here is that you are looking to go from general statements (topic, main idea) to increasingly more specific statements (major and minor details).

How to find the main idea:

- Begin by identifying the **topic**
 - the topic is a word or phrase that the text is about
 - usually answers the *who* or *what* question
 - almost always a noun (person, place, thing, idea)
- Take your topic word or phrase and make it into a statement
 - add verbs, adverbs, and adjectives to your topic word or phrase
 - What did the topic do? What happened to the topic?
 - What does the author want you to know and understand about the topic.
 - Be as general as possible -- the main idea should encompass all the details in the text
- Double check: do the details all answer questions or support the main idea?
 - if other details are present that aren't covered by the main idea, you need to expand your main idea by making it more general
 - For example, I might have a MI of "There are many positive effects of [topic]." But, if the text also lists some negative effects, then I have found the major detail, not the Main Idea.

Tip: Use key words and phrases to help. Main ideas often use general phrases. For example, a common main idea might be "There are several positive and negative effects of [topic]" or "[topic] is caused by several contributing factors/reasons." Those effects or factors or reasons will be the details that answer questions about the MI (e.g., What are the positive effects? What are the negative effects?).

Where is the MI often found? Are statements always a MI or always a detail? Or could a statement be either one depending on the context?

In informational texts, the MI will mostly be found near the beginning of the section or paragraph. In many textbooks, the MI will be the first sentence (which is why some previewing methods call for reading the first sentence of each paragraph during your preview). There will be exceptions though! Sometimes that first sentence will function more like a link to the previous ideas instead of actually introducing the new idea that the section is mainly about. Sometimes that first sentence or two will be a brief anecdote (short story about 1 example) designed to increase your interest and/or make a theory more approachable and real (by giving it a name and a face to attach it to). The MI of the text isn't about that one story/anecdote; that anecdote is just one example of the MI.

In this  [powerpoint](#), I go over an example of taking a sentence and showing how that sentence could feasibly be a MI or a detail depending on the surrounding context.

I'm still having a hard time finding the MI in passages for my paired course... What should I do?

First, don't beat yourself up too much! As texts increase in complexity, you should struggle a bit. If you aren't struggling at all, you probably aren't being challenged enough!

- See me during office hours or set up an appointment (email me with 3 times that work well for you).
- In townsendpress.net, there is a low cost membership (~\$15) that would give you access to many exercises to practice with
 - I would be happy to meet with you to practice, as would learning specialists in the academic achievement center on LIB first floor
 - the exercises have explanations for each answer
 - Please see me before purchasing this to discuss the benefits and make sure you purchase the correct membership (TPN has MANY different memberships!)

Required: Paraphrasing

In general, paraphrasing is a necessary underlying skill to be successful with annotating and note-taking.

Paraphrasing is an excellent skill for monitoring comprehension. If you can't paraphrase what the text states, it's very likely you have not fully comprehended the material. I use paraphrasing extensively while I annotate and take notes.

When I read, I constantly paraphrase the material, usually in a paragraph by paragraph or section by section manner (depending on my prior knowledge and general density and difficulty of the material). These paraphrases often are written as my **marginal notations (annotations)**. I can then use these marginal paraphrases to

- review while studying
- aid in note-taking
- aid in summarizing

Resources:

[OER Textbook Resource](#)(opens in new window) [openoregon.pressbooks.pub]

Interactive Content

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Tips

- Make the paraphrase meaningful to you -- early on, use **vocabulary** you are comfortable with. However, be sure to try and push yourself to use the specialized jargon (tier 3 vocabulary) of the discipline -- don't substitute a synonym for key vocabulary words that the author or instructor has bolded/highlighted. Using those terms in your paraphrases will help you make better connections and be more likely to remember the term. It will help to move the vocabulary from your receptive (listening/reading) vocabulary into your productive (speaking/writing) vocabulary, making it more likely for you to remember it and **use it** during that essay exam!
- Use the **pattern of organization**
 - helps you to identify the important info
 - use the verbs in the pattern of org titles (e.g. causes, affects/effects, describes, contrasts, compares)
 - use transitions that make sense for that pattern
 - try to expand and use new transitions

Note: Be wary of plagiarism

When you paraphrase something in your notes (particularly if you are doing research for a paper) be sure to **write the source** (I typically do this in the margin to the side of the paraphrase/comments function in MS word). Generally, paraphrases should

still cite the author -- you are using someone else's ideas: cite them! [to restate this: even if you aren't directly quoting or copy/pasting the author, paraphrasing still should be cited! Make sure to clearly put the source in your notes so you don't accidentally plagiarize]. This is one of those "better safe than sorry" ideas -- over-citing is easily corrected (by simply removing the citation). Under-citing, even if it is accidental, can quickly get you into serious academic trouble.

4.3: Annotating

What is Annotating?

Annotate: A broad term that encompasses any **deliberate marking of text** that will **aid comprehension through active reading**

Personally, I think of "annotation" as an external written record of my internal use of active reading strategies. This "record" of my thoughts is typically very valuable when I return to a text a week or more after reading (e.g., when I'm reviewing for the unit test or the midterm/final); rather than needing to re-read the whole text, I can use my annotations as step 1 of my review session (with my notes typically as step 2).

As you will see below, the specific methods and procedures of annotation is an area of contention in the research. There is no one perfect way to annotate, and my annotation methods sometimes change based on my purpose, the style of the text, and my prior knowledge. Simply, while the research doesn't necessarily agree on the perfect way to annotate, pretty much all annotation research finds that having ANY consistent system is better than not annotating at all.

Why should I annotate?

Annotating effectively is an important step in the reading process. Not only has annotation been found to **increase overall comprehension**, it is a useful **study tool for when you return to the text** (think about the forgetting curves from previous classes).

- Effective annotations will often make re-reading large texts unnecessary -- reviewing my annotations will be enough to renew those neural connections and keep the important info in my long-term memory. Conversely, annotations that I can't make sense of or don't remember the importance of are often a good signal that I should re-read that section of the text.
- In addition, annotating helps retain focus and be an active reader. It forces the reader to constantly monitor their comprehension and is an easy check for engagement. If I've gone several dense paragraphs with no annotations, it's likely I am no longer actively engaged in the reading (and am engaging in that passive type of reading where I reach the bottom of the page and say "what did I just read???").

A Note on Highlighting

Before we continue, one quick note about **highlighting**: highlighting is a useful tool. However, highlighting by itself isn't really enough (in the same way underlining on its own isn't enough). When I return to the text, I will have to simply re-read all my highlighted sections. If it is unclear *why* I highlighted a section, or how that section fits into the whole, now I am stuck re-learning material... my short review session is no longer short... The marginal notations are the useful part when I return to the text.

In addition, many students often over-highlight. If half the page ends up highlighted, did I really pick out the most important info? Did I actually reduce my study time when I return to this text later?

If/When you highlight, consider using several different colors and have a specific purpose for each color (e.g. yellow: Main Idea; red: negatives; green: positives;... yellow: evidence of theme 1; blue: evidence of theme 2 etc.). Also, consider adding marginal notations to explain the purpose of the highlighted part.

How do I annotate a text?

Simply, there is no one way to annotate. Everyone's system of annotation should be different based on their needs, styles, and preferences. Some research has found the system of annotation to be less important than simply annotation in general -- any style of annotation is better than no style.

However, most annotation systems have common features:

- Combination of **intratextual** and **marginal** notes/marks

- **intratextual marks** include underlining, circling, highlighting and bracketing. As noted above, be careful about "over-marking." Try to focus on only marking the most important parts, even down to the phrase level (you don't necessarily need to highlight/underline a whole sentence). The process of narrowing down your markings to only the most important details aids comprehension and retention greatly.
 - Nick Mancini's strategy: I typically [bracket] main idea/thesis; circle or **bold** important words or phrases that stick out to me or that I don't know + a marginal note (see below: I use the marginal note to remind myself *why* I circled the word/phrase or to write a definition of the word/phrase); and underline key details that expand/support/explain the main idea. I often use numbers (1, 2, 3) to mark the evidence or examples so I can quickly find them and can quickly check to be sure I have recalled all the examples during my study session (e.g. I can list 3 without looking, but there are 5 listed in the text --> now I've focused my study session to the 2 things I didn't remember instead of studying all 5 equally).
 - I do also use other symbols too -- *stars/asterisks* for key ideas; exclamation points (!!!) for things that surprised me or seem to be particularly astonishing; a tilde (~) for a connection (plus marginal notation); question marks (???) for parts that confused me (maybe I need to seek help or re-read)
- **marginal notes** are, without question, the more important form of annotation. These are how you respond to the writer and demonstrate that you are reading actively. You might paraphrase ideas, ask questions, agree or disagree, make connections to or within the material, or make an inference. **While the intratextual marking might show what is important, the marginal notes show why it is important, how it fits into the text and/or course, and how you reacted to the text.**
 - Mr. Mancini's strategy: My marginal notes vary greatly by text. However, I am always trying to do the same things. After I read and annotate a text, I try to think about the components of the list below: Did I do all those things? Can I do them now that I have finished the reading?
 - Make connections to the text
 - Monitor and clarify meaning
 - Apply vocabulary building and word study strategies
 - Paraphrase and Summarize main ideas and details
 - Create questions regarding the author, text, self-understanding, and think aloud
 - Visualize, create and interpret graphics
 - Make logical inferences
 - What was the author's purpose? Why was this included in the text? Why now in the text? (why does (or doesn't) it have it's own area or heading?)
 - In general, I try to use different colors or symbols for each type of annotation to help me review more quickly when I return to the text.

To simplify this list, here are the "Big 4" annotations found consistently in the research:

- Paraphrase both the content and the author's purpose
 - what are the main ideas and details of this section?
 - why did the author include this section? how does it fit into the overall chapter/text?
- Work on the vocab
- Ask questions
 - for your professor (office hours go better when you have a specific question about a specific part of the text vs. "I don't get chapter 3")
 - for the author of the text
- Make connections
 - to other parts of the course
 - other courses
 - outside of school

If I do those four broad things when I annotate, I'm usually doing a good job reading actively, and I usually have a better understanding of the text during my first reading.

Annotations at different "levels"

- Markings at all 3 different "levels" of reading: **literal, inferential, applicative**
 - **literal** is understanding the ideas of the text

- paraphrasing, identifying the main idea and details
- **inferential** is drawing conclusions based on the text + your schema/prior knowledge)
 - marginal questions, marginal statements about the validity of a point or evidence, connections between parts of the text
- **applicative** is being able to use the information beyond the text (aka "in the real world").
 - applying and connecting it to other parts of the course, making connections to other knowledge and ideas

Sample Annotation Systems

Interactive Content

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[View this Interactive Content online](#)



Steps to Annotating

[OER Textbook Resource](#)(opens in new window) [openoregon.pressbooks.pub]

Annotation Guide for Reading

Finally, internet searches for "annotation systems" or "annotation symbols" will give you other ideas for symbols and systems that work well for you.

Remember, be flexible with these -- there is no one perfect system and your system should change based on topic/discipline, style of text, and your prior knowledge.

Digital Annotation

Today, we tend to do a lot more of our reading on a screen where the traditional pen-on-paper annotation might not be possible (touch screens and styluses might quickly make this thinking outdated and are making the computer-based experience feel more like traditional pen-on-paper... but, only time will tell. I'm both personally and professionally interested in seeing if these newer touch screen/stylus combos can be "a best of both worlds").

Traditional paper texts are generally recommended when possible

Why?

- Traditional paper texts generally minimize distractions (think back to that focus and attention pages earlier in the course: I often treat my phone/computer/tablet as a play-thing and my brain knows this; it's auto-connected to tons of games/ social media/other distractions; text messages tend to pop-up on the screen/distract me when they arrive with sounds/lights/ images etc.)
- When using etexts, it is generally just harder to skim and scan longer, denser, more complex texts
 - many e-readers don't show whole pages at a time/the whole page becomes too small on the screen to be useful/readable
 - load times while page flipping
 - harder to look at the intro at beginning of chapter and summary pages at end of chapter rapidly (as in a preview)
 - [Frankly, this process of flipping back and forth between or through the pages just feels less natural for me personally... Research also generally supports that people struggle with this skill on e-readers -- we'll see if this holds true as more people use e-readers on a regular basis though...]
- When we read on our digital devices, most people have trained their brain to not read deeply while using the device -- when people read on a tablet or phone, they are most often:
 - ▪ ▪ reading very short texts

- skimming webpages [but not typically full-text pages like an academic textbook -- skimming a webpage is NOT necessarily the same as skimming a textbook] (also not actually *actively reading* the webpages either, at least not in a way that helps academically...)
- multi-tasking between apps/pages/content
- In general, all of those habits are, at best, not beneficial (I'd argue they are even detrimental) for active, academic-style reading; as we've discussed in other areas of the course, habits are hard to break! When I use the same device for these 2 very different reading styles, generally my performance suffers.
 - Note, the research in this area is growing -- however, there is a lot of research coming out over the past several years that discusses how students who use a device for both pleasure and academic study often revert to the "pleasure-reading" behaviors, even while reading an academic text while using that device. Frankly, it's not very clear if having a separate e-reader you use only for school can help alleviate this problem or not (I've only seen some very small studies about that idea...).
- Some research has found that writing has memory advantages over typing (writing might create stronger neural pathways... I'm not sure the evidence is strong enough to definitely say you should write notes/annotations instead of type, but there is some compelling evidence... and anecdotally, I personally find I tend to remember things better if I write them vs. type them... but again, the evidence in research on this topic isn't very strong)

On the other hand, e-texts do have advantages

- hyperlinks within the text
 - can be exceptionally powerful with strategies like PILLAR (from [previewing](#) chapter)
 - think about how many hyper-links I have been able to include on these pages throughout the text. Could I do that in a traditional textbook? Ya, kinda -- I could say "see p. ___ for more info" -- but that takes more time than just clicking a hyperlink! Most physical textbooks don't do this type of inter-text linking... Most e-texts do! This inter-text linking has been somewhat shown to increase overall student comprehension in some studies. [another not very well-studied area of reading!]
- The "find" function (typically "ctrl+f" but not always -- different readers might have other hotkeys)
 - VERY useful when skimming or scanning for specific terms/ideas
 - typically considerably faster than using an index in a textbook
 - great for completing study guides wherein I need to memorize specific info (e.g., in a history class, I might be asked "what is significant about/on x date" -> ctrl+f "x date" -> boom, there's the answer)
- physical pros
 - access on any device (assuming it is on a "cloud service" -- I don't know of any ereaders that are NOT on a cloud at this point...)
 - lighter/less space/no heavy textbooks
 - no paper
 - (possibly more environmentally friendly? although I've seen some analysis showing the electricity usage + the battery materials (i.e., lithium mining, long-term battery disposal, etc.) is actually less environmentally friendly? I don't know; you have to make a lot of assumptions about shelf-life of books vs. e-readers to do an analysis like that...).

Annotating an etext

If you are using an etext or are reading on an electronic device, annotating is still possible and, in general, the same methods from the previous lecture tend to be useful as in a traditional pen-on-paper medium.

In MS word and google docs, there are many ways to create **in-text annotations** using the highlighter and/or font features (i.e., bold, italics, underline) and/or font color and size. You can also add **out-of-text or marginal annotations**:

- in MS word: top menu -> insert -> comment
- in google docs: when you highlight a part of the text, a box pops up on the right side: one of the options looks like a speech bubble -- that's the add comment button. the same button is also typically in the top menu too.

Different e-readers should have this functionality too. Unfortunately, different software vary too much to make generalizations about how to access the annotation features. However, they all **should** have ways to annotate **both in text and in the margins**. (If you are shopping for an e-reader, this is a feature I would look at before buying -- what annotation features are available? How easy are they to use? Do the annotations save across devices? etc.)

If you are reading directly from web-pages, you can typically download the article into an e-reader or MS word (or even copy-paste as needed if the website does not have a download option).

Alternatively, there are many annotation tools that can work directly within your browser (some are extensions, some are apps, some are actual programs on your computer).

[Diigo](http://www.diigo.com) [www.diigo.com] and [Hypothes.is](http://web.hypothes.is) [web.hypothes.is] are two common tools that are reasonably user friendly. If you have any trouble with these, please see me during office hours/schedule an appointment or work with a learning specialist in the academic achievement center in the first floor of LIB.

These programs can double as bibliography resources for research papers too -- they have options to create different folders -> put the websites in folders for specific papers/classes -> makes writing a bibliography easier.

4.4: Taking Notes

What is Note-Taking?

Note-taking is almost too broad a term to define neatly. Note-taking is any task which

- monitors, aids, and demonstrates comprehension
- is done outside of the text (as opposed to "[annotating](#)" which happens in the text/in the margins of the text)

Characteristics of Good Notes

Simply, note-taking should vary drastically based on the text (specifically [author's purpose](#) and [pattern of organization](#)), your [prior knowledge](#), and your purpose for reading.

There are myriad styles of note-taking backed by research, and there are countless ways researchers and instructors have developed to rate how "good" notes are. However, generally speaking, "good" notes have **4 characteristics** that most research agrees on:

- **Use a Main Idea -> Detail layout that shows the relationships between the material**
 - - our brain remembers things better when the info connects to something else
 - utilize the pattern of organization to help guide your layout
- **Use "white space"**
 - - our eyes have a hard time picking out important details when the notes are a block of text; blank space on the page helps us see how the info connects and helps us find the info we want more quickly and easily -- which is a major purpose of notes, right?
 - Think about how I have used "white space" and text features (i.e., bullet points) in this page and other pages in our course and this textbook. It allows you to more quickly find what you are looking for during review.
- **Don't just copy; paraphrase and summarize instead**
 - - When we simply copy information from the textbook into our notes, we've turned note-taking into a very **passive** process (and we want to do the reading process **actively**).
 - Copying doesn't show any understanding. Copying and repeating is one way to add more *repetition* to your study methods, but, remember, *repetition* on its own is not enough (we also need to make *connections* to our prior knowledge/schema to remember things effectively (and/or have an *emotional response*, but that's not always easy with textbooks).
 - Part of the issue here is that the examples from the textbook are likely not going to be the examples on the test -- a big part of college is applying the concept to new, novel examples on the exam.
 - We need to paraphrase or summarize the information to really monitor how well we understand the content. If I can't summarize or paraphrase what I just read, I probably didn't really understand it.
 - Also, the purpose of notes is to help me when I go back to the material to study... if I just copied the textbook, what is the difference between my notes and re-reading the textbook? I don't want to re-read the whole textbook... don't do this for your notes!!
 - In general, I *annotate* at a sentence-by-sentence and/or paragraph level (i.e., I generally try to have an annotation per paragraph). Then, I *take notes* on a more subheading-by-subheading level. I read the whole section before taking notes on that section. This better allows me to see the MI -> detail layout (see number 1 above) and better decide which details to include (see number 4 below). I, and some research, find that when I try to take notes at a smaller chunked level (every paragraph), I tend to miss how the ideas connect to each other and copy more often without thinking about the info.
 - **A Note on Vocabulary:** With vocabulary, you **should** directly copy definitions of terms -- your definition might not be specific enough and the professor is likely to use the definition from the textbook. **However**, even with vocabulary, I will still want to do more things with the vocab in addition to copying down the definition -- **just copying the definition will not be enough to help me learn the words!** I will ALSO want to paraphrase it or explain the term IN MY OWN WORDS too! This will help gauge my actual understanding AND help me remember it more effectively. Finally, I want to both choose examples from the text and create my own examples as part of my vocab study plan. [Consider reviewing the [Vocabulary](#) chapter as necessary]

- **Use the "correct" amount of detail**

- - this will vary based on your prior knowledge and the topic; there is some disagreement in the research about how much detail is the correct amount -- for example, if a author gives 5 examples of a major concept, how many should go in your notes? Well, it depends: how different are the examples? Did you already know it? all 5 might be necessary... or you might be fine with just 1 example; it's tough to make a general rule about this. However, the action of thinking about it and making that decision for a reason has been shown to aid in comprehension and retention. (i.e., students who wrote nothing or copied everything did worse than students who actively thought "should I include this example in my notes?" no matter how they actually answered the question... so, it appears that the action of actively asking the question is more important than the actual decision in many cases).

When should I take notes?

Now is a good time to think back to "[previewing](#)" and "[patterns of organization](#)" pages. Some note-taking styles are better tailored to specific types of texts. Identifying the type of text before reading, and then selecting a note-taking method best suited for that type of text will make your notes much more valuable, help you to read more quickly, and aid your overall comprehension.

Before Reading:

Although note-taking is generally considered to be part of the "During Reading" stage of reading, it really starts during your preview. I typically have my main ideas and some major details already on paper before I begin reading (by using the headings, subheadings, diagrams/visuals, introduction, conclusion, and review questions). [In Cornell style, I'll have most of the left side done before I start reading. In Outline style, I usually have the Roman Numerals/top-left ideas and usually a couple of the major details (the capital letters) completed before I read. In Mapping style, I usually have the more central bubbles with lines drawn off them ready before I read.]

During Reading:

The bulk of note-taking then takes place during my reading. Similar to the discussion in annotating, how often you stop to take notes (line-by-line? paragraph-by-paragraph? heading-to-heading?) will vary based on the density and difficulty of the text and your own prior knowledge on the topic. Personally, I tend to find that I annotate paragraph by paragraph and take notes heading-to-heading (or subheading-to-subheading) [that's a BIG generalization though that changes based on the text].

During and After Reading:

However, I'm not done with my notes when I finish reading. Some note-taking strategies explicitly call for a summary after reading. Even for the methods that don't explicitly call for one, it's generally a good thing to do (as we will discuss in [Chapter 5](#)).

In addition, think back to the [remembering](#) lesson. I should have explicit study sessions where the goal is to review my previous notes and synthesize that information to build my overall course body of knowledge. Over the course of the semester, I will revisit my notes to review them, AND I typically try to do something with the notes (e.g., write a summary of one set of notes or combining two+ sets of notes, change the format of the notes, make a broad map combining several chapters of notes (just big ideas, not the minor details/examples necessarily -- study tool: can I explain those minor details/examples after looking at the broad map?), etc.).

Note-taking is not an activity you do while reading -- it's **a process of tasks that happens before, during, and after you read as part of a broader study strategy.**

3 Styles Supported by Research

Cornell/Two-Column Notes

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

[View this YouTube Video online](#)



[Cornell Notes Template.docx](#)

[Cornell Notes Template with some instructions.docx](#)

Strengths of Cornell

Cornell notes are useful in nearly all contexts. However, they are particularly useful for vocabulary, textbook notes, lecture notes, and fiction novel study.

For vocabulary, folding the paper along the vertical line that separates the page allows you to quickly review and test yourself (similar to note-cards).

For textbook notes, turning the headings and subheadings into your left-side questions can be a very effective comprehension aid. [Really though, you should use those headings as a guide and turn them into questions/ask questions about the headings as part of your preview whenever you read textbooks, no matter what note-taking style you are using -- asking questions is a big part of active reading in general!]

For lecture notes, the format encourages the learner to ask and answer questions about the material throughout the lecture. This can increase curiosity and help you pay attention.

For fiction novels, the template works well for character study and/or character growth analysis (character name and physical attributes on left; mental attributes, decisions, changes over time on the right, with page numbers available to readily quote in a paper as necessary)

Weaknesses of Cornell

The notes don't always show how the ideas relate to each other. Because of this, Cornell notes typically aren't as valuable for writing summaries. Cornell notes typically aren't good at showing or using the pattern of organization to guide the notes. This can sometimes lead to a "shallow" understanding of the topic (e.g., understanding the facts, the *what* and *who*, but not the *how* and *why* or how the information fits together or within the course).

Some students find they leave out some important details if they aren't particularly careful about this. The format doesn't require you to find minor details and examine how they support the main idea -- you should be doing this while reading actively, but this format doesn't require it to be a part of the notes.

General Tips:

- Pay special attention to how the information fits together/relates to other parts of the text or lecture
 - use arrows or add marginal notes to show these relationships when applicable
- When using this style, your annotations have more responsibility for finding and remembering the main ideas and details
- When I take Cornell Notes, I often also utilize the TRAPS method.

TRAPS Method:

The TRAPS note-taking method can be used in conjunction with many of the other note-taking methods. Personally, when I use the TRAPS method, I tend to utilize the Cornell graphic organizer (hence why I put them together).

In the TRAPS method:

- **T**urn the heading into a question
- **R**ead a section
- **A**nswer question and/or **A**sk new questions
- **P**lace key information in your notes
- **S**ummarize the section

Nick Mancini's opinion:

Generally, I find Cornell notes most valuable for informational texts in an addition/list/example/definition pattern of organization. The process of asking and answering questions about the material usually pulls out the important information. In those types of texts, I'm typically trying to identify and remember discrete facts and not how the ideas relate to each other.

For example, if I want to learn about a place I will travel to, Cornell notes would be a fantastic format. The texts would likely be textbook-like, encyclopedia-like, and/or guide-book like. I could ask various questions: What are the popular foods? What is the climate/weather expected to be? What are the popular tourist attractions? What's the best way to travel around the city/region? etc.

A more academic example: Example/Definitions of various forms of government: (Left) type of government -> (right) discrete facts about the type of government; (left) questions I have about that type of government -> (right) answers from the text or from the professor after class/during office hours

Another more academic example: Zoology/biology; examples of various taxonomic ranks: (left) rank -> (right) explanation, examples, pictures [personally, I'd want to add non-examples on another piece of paper to help with studying!]

When the text is more focused on how events or topics interact or relate (e.g., cause/effect, problem/solution, time order), I personally find Cornell notes to not be as valuable as other formats. [remember, this doesn't necessarily mean this will be true for **you**!] I can use Cornell notes to learn about each event or topic, but I find it difficult to show how the topics interact in this note format.

Finally, I find that I do a lot of the question asking and answering part of Cornell as part of my annotation strategy, which sometimes makes my notes feel too "bare." Remember that your notes don't have to stand alone; when you go back to study, you'll use the annotations and the notes together.

Outline Notes

I. Main Idea

A. Major Detail 1

1. Minor Detail 1

2. Minor Detail 2

B. Major Detail 2

1. Minor Detail 1

2. Minor Detail 2

C. etc.

[Computer formatting note: the "tab" key and "shift + tab" keys will utilize the auto-formatting to help keep everything lined up nicely. Try it out in MS word to see what I mean]

Strengths of Outlines

The major purpose of outline notes is to identify and illustrate the hierarchy of ideas in a text from Main Idea -> Major Details -> Minor Details. Each time you indent, those indented lines should answer questions or provide details about the line above it. For example, the 1 and 2 (minor details) answer questions or provide details about the A (major detail). The A and B (major details) answer questions about the I (main idea)

Outlines are a fantastic note-taking style to prepare to write a summary or an analysis.

As a study tool, covering/removing parts of the outline can be a great way to see how much of the information you can recall. You can remove the details and see if you can fill in the outline OR you can remove the major details/main ideas and see if you can articulate how those minor details relate to each other. When I can do both of those things about a topic, I am confident I know that material and will be able to recall the material no matter the type of test questions/the cues on the test.

Weaknesses of Outlines

The format may be unfamiliar and takes some time to get comfortable with.

Formatting on the computer can be frustrating until you get the hang of it.

Outlining has no opportunity to react to the material, to include your opinions, to ask questions, or to identify your connections to the material. Your annotations have increased responsibility in this area when you take outline notes.

It can be difficult to show how the information relates to other information in the course -- when you return to your outlines to study, be aware that you need to focus on synthesizing the information into the rest of the course. Sometimes this means making a new outline that covers several lessons/texts/lectures. [This is something I do in all my courses -- I try to combine outlines from several chapters and lectures to keep a "running outline" of all course content. It helps me to see how the different readings and lectures all fit together to accomplish the course learning targets/goals.]

General Tips

Pay attention to the author's use of transition words. These help you to recognize the pattern of organization and when a new idea is being explored vs. when another example of the same idea is being provided.

Nick Mancini's opinion

- I typically use outlines as a tool to prepare for writing about a text. [This is not to say it is not useful as a general study tool -- as discussed in strengths, it can be a great tool for studying]
 - If my task is to summarize or analyze a text, a good outline will ensure that I cover all parts of the text and provide the relevant details. While an outline doesn't help me to evaluate or judge a text directly (an outline doesn't include my opinions, reactions, connections, and questions), the outline can still help me by ensuring I am including all the author's evidence when I make my judgement/evaluation of the text/ideas.
- Alternatively, in some courses, a semester long outline of the major topics can be extremely useful to study for a final or to complete a final project.
 - Take a look at the syllabus for your paired course (or other course). It is very likely that the course goals/outcomes are given in an outline format. Periodically throughout the course, I take a look at that outline -- can I expand upon it? Provide the major and minor details about that learning goal? **TRY THIS NOW WITH YOUR PAIRED COURSE SYLLABUS** -- can you add minor details about the content that your professor has already covered? Give examples of the concept? etc.
 - As I create outlines for the material throughout the course, when I revisit my materials, I can merge those outlines together. How do the ideas from these several texts/lectures fit together? Are they different topics/main ideas? Or do they expand on or contradict each other?
 - Sometimes having these outlines can help me to make sense of the course as a whole.

Note: I could quickly change this information into a more outline-like format:

I. Outline note-taking is one research-backed note-taking style

A. What is outlining?

1. minor details, an example, explanation
2. minor details, an example, explanation

B. Strengths of outlining

1. strength 1
 - a. further explanation of strength 1
 - b. further explanation of strength 1
2. strength 2
3. strength 3
 - a. further explanation of strength 3
 - b. further explanation of strength 3

C. Weaknesses of outlining

1. etc.

Maps and/or Graphic Organizer Notes

What is mapping/graphic organizer note-taking?

We began covering the use of maps/graphic organizer back in [Patterns of Organization](#)

Please review the various example organizers in that lesson. Please ask any questions you may have!

Strengths of Mapping/Graphic Organizers

- flexibility
- direct application to the specific text
- usually easy to add more info to later
- visual, spatial representation
- shows connections very well
- can be used to show reactions/opinions well

Weaknesses of Mapping/Graphic Organizers

- flexibility
 - "analysis paralysis" -- which map format should I choose?
 - I couldn't figure out the pattern of org during my preview
 - I was wrong about the pattern of org
 - the text uses multiple patterns of org (it's ok to use more than one map or blend map styles together as needed!!)
- it can be messy
 - organized and more logic-inclined people often dislike the potential messiness (especially of clustering/concept mapping)

- tough to do digitally
 - computer-ready templates of different organizers are often difficult to find/not free and are often rather "clunky" to use/not user friendly [I personally seem to get frustrated whenever I try to use a digital mapping software... some are better than others, but most aren't that great yet...]

Mr. Mancini's opinion:

Mapping is typically my preferred note-taking style because

- it is extremely flexible to apply to any text
- it uses a visual layout with arrows and white space
 - the visual, spatial layout just "clicks" for me
- it's quickly changeable
 - I can quickly add more lines and bubbles or draw connection lines to other parts of the page

Honestly, I create a map of most texts I read, regardless of my purpose for reading. I can use them

- to prepare for writing (like an outline -- a cluster map/concept map is very similar to an outline)
- to study (covering parts of the map; creating a new map from memory and comparing it to my notes to see what I didn't remember)
- to flesh out my reactions to the text (use a different color to write reactions next to the details/ideas).

I often use a whiteboard for my initial map. First, it takes away some of the pressure of being "perfect" right away (easy to erase/change/draw new arrows). Second, it gives me plenty of space! I can step back from the whiteboard and see all the connections very easily. I can use different colors for different ideas or themes. It just gives me a lot of flexibility in a low pressure medium.

Should I take notes on the computer or on paper?

Note: Overall, the answer is pretty similar to the discussion in "should I annotate digitally [...]?" from the [4.3: Annotating](#) page.

In short, this is an area that needs to be researched more!

The big disadvantages (in this and other research on the topic) of computer notes are

- 1) the general ease of distractions/getting distracted and
- 2) that, because we often can type faster than we write, we generally take notes without processing the information (we just type as much as we can, as fast as we can, in hopes that we don't miss anything).

The solution to #1) is pretty obvious. If you can't stop yourself from getting distracted if you have your laptop out, my advice is the same as I give for phones -- just put it away, turn it off, and/or use the parental controls function to limit your access to the distractions (you can even just turn off the wifi while taking notes for example).

For #2) though, this is something I've discussed more broadly in the above area on this page about "Characteristics of Good Notes"

Not everything in a lecture or text is equally important. Part of the purpose for taking notes is distinguishing between the information (is this a big idea? or an example of the big idea? or a detail about the big idea?; is this just an interesting anecdote the professor is providing to make it interesting, but it's unlikely to be on the test OR is this an example that IS likely to be on the test. There isn't one perfect answer to these questions -- what is important is that you *ask* and *think about* these questions to help improve your notes.)

In short, if I just try to write down *everything* in my notes in the same format as the text/lecture, I haven't really done *anything*. Simply copying information is a low-level skill/task that has very low level impacts on comprehension and long-term memory. When students type their notes, they are more likely to just try and write down as much as possible, rather than thinking about how the information/content fits together to form a lesson/idea.

In both lectures and textbook readings, I *don't* want to try to get everything down in my notes. I want to focus on *listening* to the lecture and reading *actively*, not on *writing* down everything. I personally prefer a map format for this first draft of notes --

I find that if I use a more rigid format, I worry about the format while writing the notes -> I'm no longer focusing on listening to the lecture or reading actively! Maps are allowed to be messy and allow me to just go for it and concentrate on the lecture or reading. When I am mapping, I just try to get the big ideas on the page, with maybe a few of the examples. I almost never write in sentence format.

Then, *after the lecture or reading*, as part of my long-term study plan (see Chapter 5: [Study Systems](#), [Summary Writing](#), [Synthesizing Notes Over Time](#)), I return to these notes and do something to improve them and re-orient myself with the material. Typically, for me, this involves re-taking the notes in a nicer format and trying to fill in the details and examples from the lecture (AND trying to make connections to other lectures and the homework readings).

There might be a spot that I can't remember the examples or don't understand it well enough to improve my initial notes. No worries -- this is what you see your professor about during their office hours. That'll be a very productive visit with a professor. You aren't going in there saying something like "I didn't understand the lecture" -- I mean, what are you asking the professor to do? Give you the whole lecture again? That's not going to be helpful for you or the professor! The visit will be more productive because you'll be able to ask a more specific question about a specific part of the lecture or text.

5: STUDY SYSTEMS, SUMMARY WRITING, SYNTHESIZING NOTES OVER TIME

5.1: Chapter 5 Goals

5.2: The Textbook Study System

5.3: [Optional] Summarizing

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5.1: Chapter 5 Goals

While you should be thinking about how you will study from the beginning of the reading process (during your preview, [link to chapter 2](#)), this chapter mostly focuses on what to do after you are done reading.

- Compare and Contrast study systems and study methods
- Apply effective study methods to your courses
- Describe how summarization can be an effective study method

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5.2: The Textbook Study System

In this section, we will look at several different study systems supported by research.

Pearson's Bridging the Gap Textbook Model

As part of the reading process, we know there are things we should do after we finish reading.

One textbook (Pearson, BTG) uses this model:

Thinking After Reading

- **Pinpoint the Topic.**
 - What was the topic? Focus on the subject using the title and subheadings to narrow down the topic.
- **Write the most important points.**
 - Review your annotations that you made while reading and use those to refine your notes. Poor readers want to remember everything (in no particular order). Good readers create hierarchies of the information (topic -> main ideas -> details; topic -> argument/thesis -> evidence and links).
- **Relate the information.**
 - Facts are difficult to learn in isolation. For example, in history, remembering discreet facts on their own is difficult. It is less difficult when looked at as cause and effect or in relation to other events. Use schemata and prior knowledge to create networks of knowledge. Make connections to self, to texts, and to the world.
- **React.**
 - Form opinions and evaluate the material and author. Blend old and new knowledge. Does it line up with what you have read before? Examine credibility. Look for bias. Evaluate the evidence.

"Pinpoint the topic" and "write the most important points" are essentially **writing a summary**. ([see the Summary writing page here](#))

"Relate the information" is **making connections** to the text (text-to-text, text-to-world, text-to-self, and connections to other parts of the course).

"React" is mainly the judgement stage: solidifying your opinions and trying to have an emotional response to the material (to make it more likely to remember long-term). These connections and reactions happen while you read (e.g., [annotations](#), [note-taking](#)) AND after you read when you go back to review your materials and synthesize the info with other course materials learned.

LSU's "The Study Cycle Resource

Study Cycle Resource from LSU's CAS

Setting up Study Times

Most research finds we are most productive in 20-75 minute sessions with 5-15 minute breaks between each session.

For the study sessions:

- Set a goal
- Stick to that topic/goal for that time period
- I vary the time based on difficulty of topic, my prior knowledge level, my interest, and my general mood and motivation for that day
- check out those 6 poster resources for other ideas on how to study more productively (get away from just passively re-reading!)

For the breaks:

- No tech!
 - Lingering distraction effect after the break
 - likely to extend the break longer than planned
- Get up and do something active/physical -- get the blood pumping again and increase oxygen flow!
 - some research has found reasonably strong evidence about positive effects of going outside
- Have a snack
- consider a reward system and give yourself that reward

In time management, when you put "study" or "work on school," that's fine for broad weekly planning (personally, I try to narrow it slightly more than this though -- make sure I have 2 hours per credit hour for each class allocated out). However, as you actually get into the day, you really want to set a specific goal for each study session -- more specific than "study x class" -> you want to have something you can measure at the end so you can confidently say "yes, I met that goal" or "no, I need to schedule more time for this tomorrow/next week."

In general, the overly general "study" time is typically spent doing receptive study activities repeatedly (such as re-reading your notes) that aren't actually very effective study methods.

For example, to avoid these issues, I might set up a 90 minute study plan like this:

- 10 minutes: Preview Chapter 2
 - Make a plan for reading the chapter
 - Execute the plan for reading the chapter
- 30 minutes: Read, annotate, take notes on sections 2.1 and 2.2
- 10 minute break
 - snack time? walk outside? take a longer break and get some exercise?
- 20 minutes: Productive Study Technique: Active Recall activity
 - Write the heading for 2.1 and 2.2 at the top of the page, map or summarize what I remember
 - Pull my notes/annotation out from previous step, compare
 - add info from notes that I missed in a second color
- 5 minute break
- 15 minutes: Elaboration/synthesis
 - re-read my lecture notes from the last two classes
 - what's similar and different from lecture vs. textbook? Can I summarize this info across sources together? Can I make connections across the course content?

Then, tomorrow, I'll do a pretty similar process with sections 2.3 and 2.4.

However, one of my 20 minute sessions is going to be to repeat the productive study technique for 2.1 and 2.2 (i.e., I might make that part 30 minutes on day 2 so I can do 2.1-2.4 -- hopefully it's pretty quick for 2.1 and 2.2 as this isn't your first exposure anymore). If there's not much of the second color (stuff I forgot and had to fill in after reviewing my notes) -> I'll take a day off that material and try it again on day 4. If there's a lot of that second color -> I'm either going to try it again on day 3 or I might back it up and do more receptive study of the parts I forgot on day 3. This might also be a signal that it's time to go to tutoring or office hours for this topic.

Another model with information: [College Study tips and strategies.docx](#)

6 Effective Study Strategy Posters

[Effective Study Strategy Posters.pdf](#)

The Learning Center, University of North Carolina at Chapel Hill's Studying 101 Page

[UNC's Studying 101](#) [learningcenter.unc.edu]

SQ3R, S-RUN-R, PQ4R

SQ3R/SQ4R

Below is a document from Utah State University that does a nice job explaining this strategy. (Note: SQ3R typically doesn't include the "Reflect" *R*; SQ4R does. That is typically the only difference).

 [SQ4R_Reading_System.pdf](#)

My criticism of this document is the "Review" sessions they describe are pretty much all "receptive" study techniques (e.g., re-read your notes, look at your annotation). The only "productive" technique they mention is to create a practice test (but as I've discussed in other areas of the course, practice tests are a great strategy, but I think they are very tough for students to make effectively, especially for the first test in a new class with a new-to-you professor... when I see students try to use this strategy, the practice tests aren't always very well done... I generally find students have more success doing summaries and/or other active/free active recall activities (like mapping on the white board for example). After test 1, this strategy of making practice tests usually works better for students since they have a better idea of what to expect... finally, most professors provide students with study guides and/or practice tests now...).

Below is a video resource of a "revamped" SQ3R that still uses the same nice acronym, but updates the 3R's to what I would consider good alternatives based on concepts we discussed in other parts of the course.

YouTube Video

This interactive element is not available in this format. Visit the link or scan the QR code to access it online.

[View this YouTube Video online](#)



S-RUN-R

[Reading-and-Remembering-Strategies.pdf](#)

This document includes SQ4R and a few other strategies too.

Notice the similarities between all the strategies. Again, I personally don't think it too important to use a specific cute name/ acronym/initialism; rather it's important to think about doing each type of activity each time you read and throughout the course. If the name helps, great!

PQ4R

[pq4r.pdf](#)

This is a resource from Dayton University that goes over the PQ4R method. Again, pay attention to the similarities between the different strategies.

(optional) FASTER

[Big Think Article\(opens in new window\) \[bigthink.com\]](#)

Haven't heard of this acronym before reading this article in late 2023; similar info to other things we've discussed in this course. Cute/Nice acronym though and written in a conversational style -- I feel like it's worth checking out and reading through. However,

as far as I know, this method has no specific research backing (although many ideas discussed on the page DO have research backing) [the above acronyms/methods have specific research backing with that specific acronym... FASTER does not, as far as I know/can find. Still, I think it's worth checking out].

Synthesizing your notes over time/RECAP strategy

Why should I synthesize my notes?

There are 3 major reasons for doing this:

- prior knowledge and connections to your prior knowledge have huge effects on your comprehension
 - As you increase your knowledge base in that topic/discipline, you'll be able to make new connections to the material
 - The foundational material from the beginning of the course (or from the introductory course in that discipline) will likely be much clearer now (after you have read/heard/learned more content) than it was when you first read it.
- Gives you another exposure to the material which aids in remembering in general
 - spaced-over-time repetition improves both short and long-term retention
- the information presented in a course comes in many different formats -- how it fits together might not be immediately clear
 - use the course objectives and outlines from the syllabus as a tool to aid in this process
 - how does the text build upon the lecture? How does the lecture build upon the text?
 - in lower levels, it was likely common for your teacher's lectures to echo and reinforce the text (mainly being the same information repeated to aid comprehension of the text); however, in college, that is rare -- it is much more likely that the lecture and the text present different or expanded info about a topic. For example, in college classes, a professor's lecture might even challenge the text author's point or provide counter-evidence to that text.
 - It's important to think critically about how the information fits together: is it a repetition to reinforce a point? Does it provide more examples of the same main idea? Or is it tangentially related to the text? Does it challenge the text's point or evidence? Does it present a different point of view on the topic?

One of my personal methods for synthesizing material:

- In a traditional 15 week course, the content is probably divided into several 3 or 4 week chunks or modules. [USE THE SYLLABUS AND SCHEDULE TO FIGURE THIS OUT! Similar to the idea of previewing texts, research supports the idea of "previewing" your courses during that first week to find out the general course format -- how does the course fit together? what will I be learning about? when? how? etc. this accomplishes many of the same goals as previewing an individual text]
- As part of my notes about a chapter, lecture, or resource, I write brief summaries about each source.
- About half-way through the module (likely 1.5-2 weeks), I go back and do *something (usually a productive study technique rather than a receptive one)* with those notes.
 - I might try to redraw my map without looking **[aka "Free recall"]**
 - I might cover the details/examples in my notes and read the ONLY main ideas and see if I can explain the concept or give examples of it [similarly, I can do a preview of the textbook -> use the headings/sub-headings, cover the text -> what do I know about that sub-heading -> compare what I remember to the text and my notes -> helps me decide how much study time to devote to that section] **[aka "Active Recall"]**
 - Conversely, I might cover the main ideas -> give myself the details/examples -> see if I can remember the main idea/name of the theory etc.
 - Similar to learning vocab, I want to make sure I learn the content in many ways -- I don't know if the professor will give me the theory and I have to give examples or if they'll give me examples and I have to name the concept/theory. Preparing for both will help me do better on the test and it will increase the likelihood I have good connections -> remember the content for future courses too! **[aka "Active Recall"]**
 - I might skim the notes and re-read my summary [receptive study]
 - Unfortunately, your notes will likely include some information that ends up not being that important. This process will help you focus in on those important ideas that are likely to be on the test. This also lets you start to identify how the info from different areas fits together.
- Whatever I choose to do, I next:
 - Take time to write a summary of multiple sources together
 - At this point, I might have notes about 2 or 3 chapters and 2 or 3 lectures
 - What's similar and different between the sources? What topics permeate through all the sources? How do they fit together? Can I summarize what I've learned from all the sources?

- I repeat this process again before the test (so, once at week 1.5/2, again at week 3/4).
- As I do this throughout the course, I am significantly cutting down on my later study time (or cramming time...) before the major unit tests and/or the final exam.
 - When I do a good job of this, I simply don't have to study very much the night before the test. While others are drinking coffee and cramming the night before, you can get a good night's sleep and perform your best!

I might use other methods, like a course-long timeline in a history class. I'd use different colors based on themes in the course -- at the end of the course, I'll have an awesome resource for the final exam.

Every course is different -- I'll use the same general timeline and framework for ANY course. However, I'll use different mapping or summarizing methods based on the type of course. Think back to those [patterns of organization](#) -- some patterns are much more common in specific disciplines. Use those patterns to help guide your summarizing and/or map-making activities.

Another way of thinking about this idea:

- Try to synthesize a few of your early chapter's notes together with your current notes. How does the content from 5 weeks ago fit in with this week's content? Why are we learning about both of these concepts in this course? What's the pattern of org of the course content overall?
 - Check out the course's goals and outline in the syllabus -- can you see how the assignments, lectures, and readings are fitting together to make a course? (This could be a cool part of your portfolio for this class!)

Concept Maps

Rather than writing synthesizing summaries, sometimes I will instead draw a big concept map. [This is the same process we discussed as "Free" or "Active" "Recall" for [vocabulary study](#)] Especially if there are lots of complex connections, many unique examples, or if you simply feel like more of a visual or tactile learner, making a map can be better than trying to write a summary. For this, I rent out a room with a big whiteboard (use the first floor of the library!). Often, I'll invite a study group if I've found one.

- Then, I'll just try to go for it -- what can I get on the board ***without*** looking at the course objectives or the notes? What do I know about the course materials? What are the big ideas? What are the examples of those big ideas? [Something about the whiteboard being easy to erase and see the whole thing and use colors etc. makes me feel less pressure to be perfect at the start -- ***sometimes when I try to write summaries, I get "analysis paralysis" and I just can't seem to figure out where to start and I end up staring at a blank screen or typing and deleting over and over -- if this is happening to you, try this mapping on a big whiteboard method. When I'm struggling to focus, the summary sometimes just feels like "too much." Try mapping.***]
- Next, I'll look at the course objectives and outline -- now what can I add to my map?
- Next, I'll look at the headings in the textbook (like during a preview). now what else can I add?
- Finally, I'll look at my notes and summaries. What did I miss? What can I add?
- After this process, I typically feel VERY well prepared for whatever type of test my professor will give.

Sample Test Questions

Research highly supports the idea of ***creating sample test questions and anticipating test questions***. It's a great strategy and you should try it! However, especially for the first test, or in an area in which I have low prior knowledge, I might not feel very confident in trying to make a test (and the test I create might not actually be very good...). The summary or mapping methods take some of the "guess-work" out of the process. After I've taken the first test, I find this strategy easier to use; however, I personally still favor the summary and/or mapping methods.

Connection to Vocabulary Learning

With [vocabulary](#), I do a similar process. As we get more and more vocabulary words throughout the course, we need to increase the types of exposures we use. Categorizing (discussed in that vocab module) is a great way to increase your authentic exposures to a word -- but this can be tough to do if all the words came from one chapter/lecture. Sometimes, your categories and relationships between words will become more robust after a few weeks.

RECAP Strategy

A cleaner representation of this is called the **RECAP** strategy.

The RECAP strategy:

- R: Review notes, objectives, study guides
- E: Examine for key information
 - check off the info in the objectives that you are able to clearly find/remember
- C: Consolidate the information
 - Use the course objectives/outline, study guides, and your summaries/maps from previous notes
- A: Ask yourself questions about the material
 - Using a [Bloom's taxonomy guide \(opens in new window\)](#) can sometimes be helpful for this process. Try to use verbs from all the categories. Your professor likely will on the test!
- P: Process the answers and information
 - Take time to metacognitively reflect about your learning
 - Sort the info into known/unknown
 - Try to draw the map or write a summary without aid -- see what you miss/forget.

My main problem with the RECAP strategy is the guidance for "R." Research generally supports that you should do some type of "free-recall" first rather than simply re-reading the notes as step 1. (*Free-recall* is that idea of summarizing/mapping/discussing the content "free of" or "without looking back at" the text or your notes. "Free-recall" is often also called "Active Recall" or some combo of both terms) I'm not sure how you are supposed to do "E" effectively if you just re-read your notes a minute ago... Like, when I re-read my notes, how am I supposed to figure out what I could remember or not remember for the test? I typically end up spending equal time on all topics, even though that probably wasn't the best use of my time (I should spend more time on the stuff I couldn't free recall and less time on the stuff I could remember without aids during my free recall).

Receptive vs. Productive Study Strategy Examples (Note: This is review from earlier in the textbook)

Receptive Study Techniques

These are study techniques wherein you "receive" the information. You are NOT "producing" any new content/study materials etc.

Some example of receptive study techniques are things like:

- Reviewing your annotations
- Re-reading your notes
- Going through flashcards
- Reviewing the professors PowerPoints or videos etc.

These are NOT bad study techniques. In fact, I encourage you to use these receptive techniques as ONE PART of your overall study plan. These receptive study techniques are a great way to increase repetition and strengthen those existing neural connections/memories.

However, they are NOT a great way to create new neural connections AND they often are not enough on their own. In addition, typically students will spend the same amounts of time on content they already know and content they don't already know while they are studying (when you should be spending considerably MORE time on the content you can't recall already and less time on stuff you already know).

Have you ever experience the following:

You study and study and study, but then when you get to the test, you can't seem to recall that info. It's really frustrating -- you are sitting there saying "I know I studied this; why can't I remember it!?!?!?!"

I'd make a pretty large bet that you used only receptive study techniques. Then, when the professor asked about the concept in even a slightly different way than the way you studied it, you aren't able to transfer that knowledge to the new situation... because

you never did that while studying.

Productive Study Techniques

These are study techniques wherein you "produce" new content while studying and/or use a more "self-test" model to study.

Some examples:

- Preview the chapter. After your preview, can you recall the important stuff? This will help you identify which areas you need more study AND it forces you to recall the info (you aren't just re-reading the info, you are recalling it from your memory in a similar way as you will on the test)
- Write the title of the chapter on a whiteboard. Map the chapter without looking back.
- Use the course syllabus -- see the course outline. Can you make a map or more detailed outline that explains the topics/concepts in the course outline? Compare what you write to your notes and the chapter reviews (most textbooks have these today). What'd you miss?
- With a flashcard, rather than simply flipping to the back to see the definition, produce an answer first! Don't just read the word -> flip and read the definition.
- Teach the content to someone. See if you can explain the concepts to someone. See if you can answer their questions. This will help you figure out what you need to spend more time studying.

In general, when I am designing my study plans (more info later in the course!), I try to have early study sessions have a mix between receptive and productive methods and later study sessions focusing more on productive study methods.

Sample Study Plans if I were taking a course this semester

Reading is a Process

We've talked a good bit about how "reading is a process, not an activity." As we've discussed, that same idea extends to studying too. Studying is NOT an activity I do the night before a test (well, it technically is *studying*, it's just *not a very effective way* to study). Rather, studying is a process I do throughout the unit I will be tested on.

For you [this is optional, but would be a great "artifact" for your portfolio this week/this module]: Take a look at the course schedule in your other class's syllabus. Pick an upcoming 2-week chunk of the semester. Create a study plan for those 2 weeks. What days do you plan to study? What (specifically) will you study that day? (remember, this should be a measurable goal -- what's the end goal for that x-minute study session? What do you want to know/be able to do at the end of it?) How long do you plan to study for? When will you review that material (how long? how will you review?)? How and when will you synthesize the info from previous lectures/chapters into this new info? Are you building in study sessions for previously covered material too? Try to think about varying your study methods too -- are all your study methods "receptive" methods? What could you do to focus more on a "productive" study method as part of your plan? (Receptive study methods are good! They just aren't always enough -- when students experience the phenomenon of "I know I studied this, why can't I remember it now?!?" during a test, it's often because all the study methods were "receptive" and the "cue" you used to study isn't on the test -- the professor either used a different cue or even no cue at all on the test.)

Imagine you are in a class that does 3 chapters over 3 weeks, then takes a test in week 4 (this is a pretty common set-up for a 15 week, 3 credit hour class).

I'd set up a study plan like this:

Nick Mancini's Study Plan

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
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Preview, Read, Notes on Ch 1 (Likely the Sat and Sun before too)	class 1 After class: combine my lecture notes to my textbook notes -- what's the pattern of org of the class -- is the lecture explaining the chapter? is it giving other examples? providing another viewpoint? etc. Alternatively, I might write a summary of chapter 1 and a summary of the lecture; then I will try to combine the two summaries together. This is one method to accomplish the "synthesis" goal we are attacking here.	Off Day, day to complete any smaller assignments, HW for class 2 etc.	class 2 Again, combine my lecture notes from Class 2 with my notes from class 1 and chapter 1. How does this content fit together? (Again, might use summaries here, might make a new map or outline notes, might just re-read all three sets of notes -- it depends on the class and my prior knowledge.)	Active or Free Recall activity. I'm probably going to give myself <i>some</i> cues still at this point -- maybe I'll re-read the chapter conclusion or re-preview the chapter, then do the active recall activity OR maybe I'll go for a fully free recall activity with no cues. BREAK Then, I'll review my notes, annotation, maybe even have to re-read some of the textbook (sometimes the textbook will be easier to read now that you have more background knowledge from lectures 1 and 2 in classes 1 and 2). It kinda depends on how well I do on that active recall activity for exactly what I do during this study session. Note, I'm not just re-reading and reviewing EVERYTHING! I'm focusing in on the stuff I couldn't already remember! Alternatively, sometimes I will do my "free recall" as writing a summary of the material rather than mapping it on a white board. Try out many different methods while studying! Increase the types and variety of exposures you are having to the content! Some weeks, I do the white board mapping; some weeks, I try to write a "free" summary (no aids). Both activities accomplish the same goal.	Off Day if necessary, this day can be used to complete smaller activities/ HW assignments for classes 3 and 4 if applicable.	Begin Previewing, Reading, taking notes on Chapter 2
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Finish Chapter 2	class 3 After class: combine my lecture notes to my textbook notes -- what's the pattern of org of the class -- is the lecture explaining the chapter? is it giving other examples? providing another viewpoint? etc. How do chapters 1 and 2 fit together? How do those fit together with the lectures/content in classes 1, 2, and 3?	Off Day, day to complete any smaller assignments, HW for class 4 etc.	class 4 Again, spend time synthesizing your notes together	Active recall for chapter 2 (with limited aids, like a preview of the chapter again); Free recall for chapter 1 (no aids) [Or summarizing "free" of aids] BREAK Review what I couldn't remember	Off Day if necessary, this day can be used to complete smaller activities/ HW assignments for classes 5 and 6 if applicable.	Begin chapter 3 process
Finish Chapter 3	class 5 synthesis of ideas across chapters and lectures	Off day for assignments for class 6	class 6 again, synthesis of ideas	free recall for chapters 1 and 2; active recall for chapter 3 [Or summarizing "free" of aids] BREAK Review material as needed based on my active and free recall activity	off day if necessary, this day can be used to complete smaller activities/ HW assignments for classes 7 and 8 if applicable.	Free recall of the whole unit
Off day	class 7 -- review class complete study guide (if applicable); if no study guide, probably going to try free recall again	Free Recall; study sessions as needed; get a good night of sleep	TEST DAY show what I know; celebrate not having to cram the night before; celebrate the higher grade!	Off day	Off day	I bet you need to start chapter 4 now!

As you can see, I'm doing few big things that we know work well from our discussions about study habits:

- I have a specific purpose for each study session AND I can clearly tell if I accomplish the goal or not
 - my goal isn't just to "study the material" (what does "study the material" actually mean? How do you know if you were successful or not?)

- instead, my goal is to test myself (using active and free recall) and use the result from that self-test to decide what I need to focus on. Now, my goal is to "learn this specific content I couldn't freely recall." At the end of the session, I can re-test myself to see if I've gotten it. I either meet the goal or I don't -- there's no "ya, I guess I studied" response.
- This stops me from cramming the night before the test
 - I'm not leaving all that synthesis work until the couple days before the test -- I'm doing that synthesis of ideas THROUGHOUT the unit rather than at the end of the unit.

A Tip that works together with Nick Mancini's Sample Study Plan

I found success using a model of taking 1 hour off between classes when making my schedule. Frankly, I have not really seen any research about a model like this... this is just one way I personally found success, and students who have tried it have given me positive feedback. This one-hour between classes would allow me to do a short 20-minute study session both before and after each class of the day. It would look something like this:

- 730-750: Study Session before Class 1
 - Review homework materials, review readings from past week, prepare for upcoming lecture (almost like I am previewing the upcoming lecture -- activating my prior knowledge so I can make good connections during the lecture/class activities)
- 8-850: Class 1
 - Pay attention, take lecture notes, remove distractions if necessary
- 9-920: Study Session for Class 1 synthesis time
 - reconceptualize notes? clean up my notes? fill in missing details that I couldn't write fast enough for?
 - synthesize ideas from today's class together with the readings/previous lectures
 - how does today's lecture build upon previous material?
 - maybe practice some active or free active recall
 - maybe write a summary of course material up to this point -> compare to my notes from the course
 - maybe I just need 20 minutes to re-read my notes to try to wrap my head around this (that's ok! just remember that we ultimately want to build up to the more "productive" study methods vs. the "receptive" method of simply re-reading the content)
- 920-930: Break
 - eat a snack, take a brisk walk etc.
- 930-950: Study Session before Class 2
- 10-1050: Class 2
- 11-1120: Study Session for Class 2 Synthesis time
- 1120-1130: Break
- 1130-1150: Study Session before Class 3
- 12-1250: Class 3
- 1-120: Study Session for Class 3 Synthesis

I've given myself opportunities to prepare for and to re-connect with the material on a frequent schedule -- this will help make it so I have very little studying to do the couple days before the test.

Now, this is where your stamina will come into play. How are you feeling after that hypothetical day?

If possible, take a 20-30 minute break at this point, then schedule some longer study sessions (45-75 minutes) for reading the next chapter and/or working on homework. I personally needed to do this before I go home -- too many distractions at home AND I am personally unlikely to work effectively at 8p after taking a 6 hour break from ~2p until 8p -- I know myself... and that just didn't work well for me -- it was too easy for me to not actually start those 8p study sessions when my buddies were playing video games in the living room. So, I would usually do 1 study session (for class 1, 45-75 minutes depending on what exactly is coming up in the class) , go to the gym, then do study sessions 2 (class 2) and 3 (class 3).

Some students will be like me -- gotta power through another 3 longer study sessions before going home for dinner and free-time. Other students will need a several hour break and then do those study sessions at night. ***You know you better than I do!*** However, monitor your progress as you try different times of day and activities during breaks. You might find some interesting insights about how you work best...

That would be my plan for doing 9 credit hours on a traditional MWF schedule. I'd assume that I'd work a bit on T/R, then do 3 short study sessions (1 per class) with a specific goal depending on the class (a typical session would be for the vocab, but it

could be another synthesis session or more hw time if needed etc.). If I've done that much every MWF though, I shouldn't have much to do on T/R. (This model gives me ~6 hours of study time per week per class, which is right in the range for how much HW a typical 3 credit hour class has). If I am in 15 credit hours, I'd have those two classes on T/R and use a similar study plan as above, and I'd assume that I'm working less hours per week outside of school.

Regardless of what you choose, you should be building in shorter synthesis study sessions AND longer work sessions.

Time Management Resource

Here is a fillable time management worksheet you may like to use: [Fillable time management worksheet.pdf](#)

5.3: [Optional] Summarizing

Note: Before beginning, it may be useful to review "[finding the main idea and paraphrasing](#)"

What is a Summary?

When writing a summary, an effective reader

- **reduces the length of the text**
 - research varies greatly on how much reduction is "right"
 - a general rule is 15-33% of original length
 - 5 page original: 1 page summary, likely 2-3 paragraphs depending on pattern of organization (~20% of original text: 1/5)
 - 1 page original: 1 short paragraph summary (1 short paragraph is usually about 1/4 page; 25% of original)
 - think about your purpose and prior knowledge to help decide "right" length
- **uses a hierarchical Main Idea to Detail format**
 - selects or constructs a topic sentence
 - the main idea of the text
 - encompasses all the major ideas of the text
 - paraphrases the important details
 - categorizes the details
 - use/mimic the pattern of organization to categorize the details

Resources:

[OER Textbook Resource](#)(opens in new window) [openoregon.pressbooks.pub]

[OER Textbook Resource 2](#)(opens in new window) [openoregon.pressbooks.pub]

Interactive Content

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Why Summarize?

As a **study tool**, summarizing is an effective step after annotating and note-taking.

- **as a comprehension check after reading**
 - compare your summary to a study partner's
 - compare your summary to the text's headings/subheadings, graphics/visuals, and your annotations
 - compare your summary to the chapter review/conclusion if applicable to that text

• as test prep

- re-read your summary prior to the test as part of your study sessions
- try to write a summary "blind" (without looking at your notes/annotations/text)
 - then, compare it to your original summary/notes/annotations/original text
 - quickly diagnose which details you need to review OR how the details fit together/gaps in your knowledge

• as a long-term course-level strategy

- as part of your long-term review and studying, a course-level summary can help you synthesize the whole body of knowledge into something more easily memorable and usable
 - First, summarize individual readings and notes as they are due
 - Then, every other week or so, shorten and combine your summaries in a working document
 - Review and edit this document every few weeks
 - By the end of the course, you will have a great study tool for the final exam
 - this can be particularly useful to help trace development of ideas for courses with final projects or truly comprehensive final exams

The research varies greatly regarding which strategies are best -- similar to note-taking, try different things and figure out what works best for you. Different learners and different courses will have different results. However, in general, much of the research backs summarizing as a very effective way to study, no matter the format of the tests/projects (even if you won't ever have to write an essay or a summary in the class). It forces the learner to monitor their comprehension and categorize the information -- this helps the learner move from "memorization" to true "comprehension."

In **essay writing**, summarizing is an effective tool to establish context in writing assignments. For example, in argument writing, summarizing a study can be great support for your point. In expository/informational writing, a quick summary of an event or law's application may be essential for your reader's background knowledge. Your writing teacher/classes will cover this in more detail.

Tips

- Really focus on using categories and a hierarchical structure
 - when students lose this focus, they tend to include too many small, unimportant details about 1 section while leaving out major parts of other sections
 - check the "balance" of your summary compared to the original text (e.g. I wrote four sentences about this subheading, but only 1 about this subheading -- why? should I revise?)
 - "How was your weekend?"
 - I'm really asking for a summary of your weekend
 - What details are most important? What details can be left out?
 - purpose, audience
 - chronological order? Or categorical order?
 - "What meals did you make this week?"
 - What details are most important? What details can be left out?
 - purpose, audience
 - chronological order? or categorical order?
 - See below in summary vs. retelling for more about this idea. Many students struggle identifying the difference between a summary and a retelling.
- Make the paraphrase meaningful to you -- initially, use vocabulary you are comfortable with **temporarily**. However, be sure to try to push yourself to use the specialized jargon of the discipline -- don't substitute a synonym for key vocabulary words that the author or instructor has bolded/highlighted. Using those terms in your paraphrases will help you make better connections and be more likely to remember the term. (and those terms are likely to be on the test/needed in future classes)
- Use the pattern of organization
 - helps you to identify the important info
 - use the verbs in the pattern of org titles (e.g. causes, affects/effects, describes, contrasts, compares)
 - use transitions that make sense for that pattern
 - try to expand and use new transitions
- Mess around with sentence structure and sentence order (easy to do in a word processor)
 - sometimes I'll notice new things or better understand a relationship between content when I move things around
 - simple vs. compound vs complex vs compound-complex sentences

- order of supporting details
 - why did the author put the details in that order? should I adhere to that same order?

Summary vs. Retelling

Simply, this is a tough concept.

In general though, a **retelling** always uses simple **time order** - you tell the events in the order they happened, with little to no thinking about the importance of the events or how they connect.

In a **summary**, you might still use primarily time order, but there are clear choices being made about what to include and how to include it (possibly not in time order). Especially when you are summarizing longer texts/events, it can be beneficial to abandon the time order and focus in on only specific events as examples of the major ideas/themes.

Tell me about your Sunday

First, imagine I ask you to tell me about your Sunday.

In this case, a summary and a retelling will likely be VERY similar. There simply aren't that many events to choose from in one day -- I will probably use simple time order for both the summary and the retelling.

However, in a summary, I might start off with a general MI-type statement: "My Saturday was great!" and then proceed to list all the reasons/evidence it was great (using events in time order). "My Sunday was great! First, I had my favorite breakfast. Then, we packed up the car and went to Arrowhead stadium to begin tailgating. I saw so many of my old friends. Next, I got to see a great game, and I was happy because the Chiefs won. etc." Rather than just listing the events, I've now structured it with the events acting as evidence of my claim that "my Sunday was great."

In a retelling, I wouldn't have that first general MI-type statement ("My Sunday was great!"); I would just begin discussing what I did first. This isn't necessarily a bad thing.

However, let's say my Sunday had parts that were both good and bad, and those good and bad things happened throughout the day in a mixed order (first thing was good, next was bad, next was good, next was bad etc.).

In a retelling, I would just go in time order. But... that might get confusing for my audience. I might be better off giving a MI type statement (e.g. "My Sunday had some good parts and some bad parts), and then I would list the good parts in time order, then go back in time and give the bad things in time order. This would likely give my audience a better understanding of my overall day.

Retelling: First, I made breakfast, but I burnt it. It tasted so bad I had to throw it away. Then, I went to the park and played with my kids. It was very fun. But, then on the way home, I fell off my bike. Next, when I got home, the kids took a nap, and so I was able to play a board game with my wife. etc.

Summary: My Sunday had some good parts and some bad parts. I had a great time playing at the park with my kids and, while the kids were napping, playing a board game with my wife. I enjoyed both because _____. However, I burnt my breakfast in the morning -- not the best way to wake up! Also, on the way home from the park, I fell off my bike. Overall, the day was good, but it could have been better.

Neither example is "wrong." However, the first one simply feels more disjointed -- it doesn't really flow very well and, more importantly, I think that first one will be tougher to memorize, learn from, use as a study tool for an exam. Also notice the added analysis-type statements in the summary. **That added analysis increases my understanding of the events!** ("I enjoyed both because" AND "not the best way to wake up")

Categorizing things is something humans love to do and the research supports that categorizing things aids in memorization and recall. Using summaries as a study tool is a proven, high-quality, study method (will discuss more in future classes).

Tell me about your month-long-vacation

Second, let's imagine you go on a month-long vacation (life goal right there!). A retelling would be a TERRIBLE way to discuss your vacation with your friends. It would take too long and would include details that they'd likely be unsure of why you are telling them about.

In my summary of my vacation, I would very likely NOT use time order only. Instead, I'd probably break it up into categories (i.e. food, lodging, cultural events/exhibits/museums, travel systems). Rather than simply tell you what I did each day in order, I'd probably break it into categories, and then go in time order within the category: "The food was incredible! On the first day, we had ____; it was _____. Then, when we got to _____, I got to try _____. It was so _____. " Then, I'd start on the next category: "We stayed at some really nice places, but some of them were overpriced for what they were. One was also downright terrible. The first hotel in _____ was _____ because _____. Then, once we moved to _____, the hotel wasn't as nice as I expected because _____. The last hotel, _____, was awful because _____." etc.

Sports

Next, let's change gears: sports. On most sports-centric websites, when you click on a score, it will take you to a page that will have a "game-recap" (or summary) and a "play-by-play" (or retelling). The retelling will simply go in time order and tell you what happened, in the order it happened. That's it. No analysis, no looking at trends or themes across the game, etc.

However, in the summary, they usually begin with a) a brief synopsis of what this game means in the context of the broader season (e.g. "in a clash of two division leaders with playoff seeding implications") b) the end result of the game and/or c) how a particular player of interest played or a describing a particularly exceptional day for a player (bad or good). Then, they might go into a little bit of time order for the overall game; however, they will very likely mix in some analysis within the time-order (e.g. In the top of the seventh, _____ got his 3rd hit on the day, moving him above a .300 average for the season [.300 average is a meaningful cut-off for a great batting season in baseball] OR In the middle of the 4th quarter, star running back, _____, gained over 100 yards for the 10th time this season. This is the 4th year in a row he has surpassed this milestone.)

Alternatively, you might see a game summary where they go in "categories" (like on the long vacation example above). They might first discuss how one team's offensive unit performed vs. the other team's defensive unit (discussing the whole game in mostly time order with some analysis/trends sprinkled in) and then start at the beginning of the game for the other offensive unit vs. defensive unit.

Another example:

"After a groundout by Moustakas advanced Hosmer to third base with one out, Pérez hit a ground ball to third baseman David Wright. Wright, after checking Hosmer at third, threw to first base for the second out; however, Hosmer broke for home as soon as the ball was thrown. Duda, who fielded the out at first, threw wide at home attempting to throw Hosmer out, and the latter scored the tying run. This resulted in Familia blowing his third save of the postseason and the series; his eight save opportunities tied the postseason record set in 2002 by Robb Nen.[69]"

Does it use time order? Yes! It is primarily in time order... but is all of it? Check out that last sentence... is that still time order? NOPE! Yet, it fits well and naturally in the summary.

TV Series

It's common for TV series to have a recap of previous episodes before the show begins. In general, these are often not retellings. The showrunners will only show you events from the past that have a direct influence on the events in today's episode. In shows with many characters and storylines, sometimes a character/storyline might barely even show up in that episode -- it's unlikely that storyline will show up in the pre-episode recap. But then, next week, they might show that whole character's arc over the past season.

They might also go out of time order and instead go in character's-time-order, particularly if the character's storylines haven't yet come together. They'll show you one character's overall story progress in time order, then they will switch to the other character and again go in time order through their entire story. It might make less sense to bounce back and forth between the characters like in normal time order in this quick summary.

Final Take-aways

Sometimes a simple retelling in perfect time-order makes sense.

But, in general, as the piece becomes longer and/or more complex, using other methods alongside time order will make the summary more valuable. This is especially true if you are using the summary as a study tool (we will discuss this more later in the course, but simply, writing summaries is an EXCELLENT study tool).

True, deep, college-level comprehension is NOT just knowing the order things happened. It's also recognizing **how the events fit together, why and how some events are more important than others, and how the events are specifically chosen by the author to teach us something (through themes for example).**

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