Academic Wellbeing presents. . .

Study Techniques

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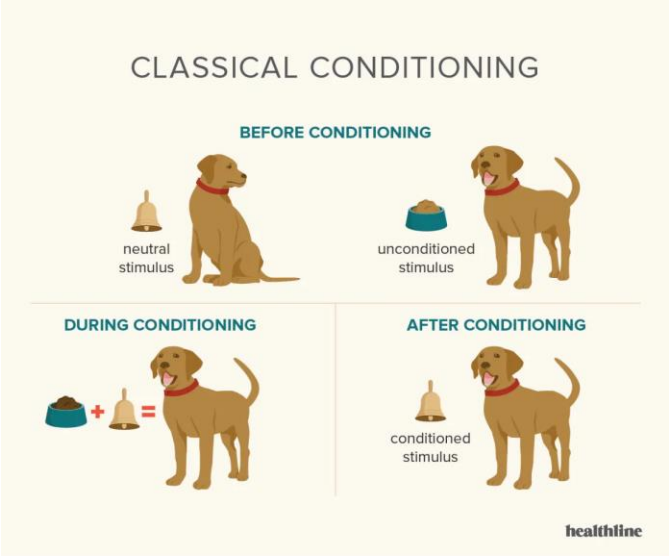
Active Recall Techniques

Active Recall Techniques encourage the brain to move information from short-term memory into long-term memory. This allows students to have better recall of information when taking exams or participating in class discussions. The following are common active recall techniques:

1. Flashcards
2. Write Questions While Taking Notes
3. Complete Study or Reading Questions
4. Practice Tests
5. Visual Aids
6. “Teach a Friend”

Concrete Examples

In order to help with understanding and recalling information, concrete examples can be paired with term definitions. First, create a declarative definition (a short one or two sentence explanation of a concept). Then, write down an example of the definition. Pairing a concrete example with an abstract concept allows students to understand concepts better. See format below:



Term: Classical Conditioning - first studied by Ivan Pavlov, classical conditioning is a learning process that occurs when two stimuli are repeatedly paired: a response which is at first elicited by the second stimulus is eventually elicited by the first stimulus alone.

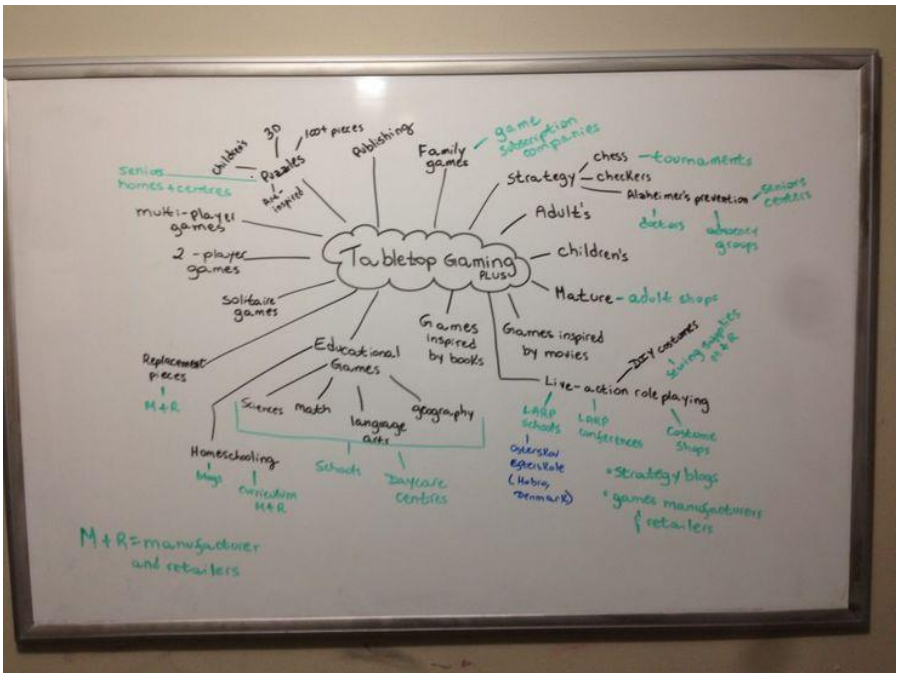
Concrete Example: Dog salivating to Bell

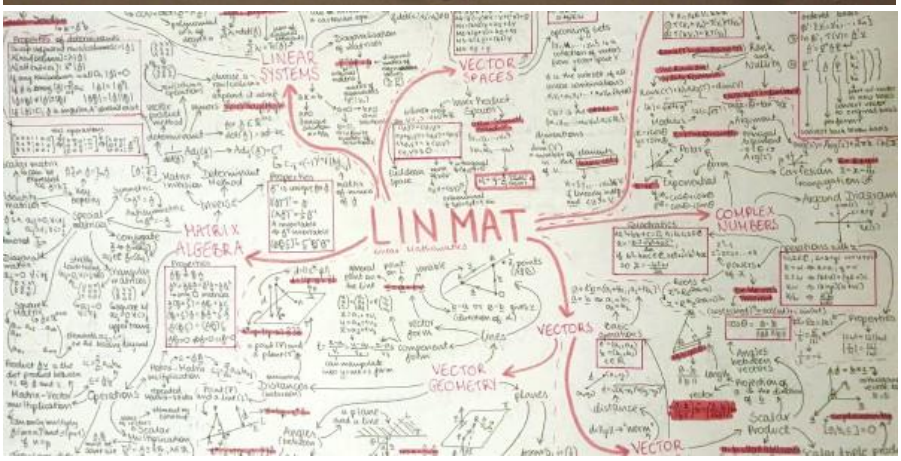
Concept Mapping

Students often use concept mapping to study the relationships between ideas. Through diagraming, students can connect concepts together and learn how these connections may be impactful.

Whether used for brainstorming purposes or for linking terms, concept mapping is an easy way for students to organize course content.

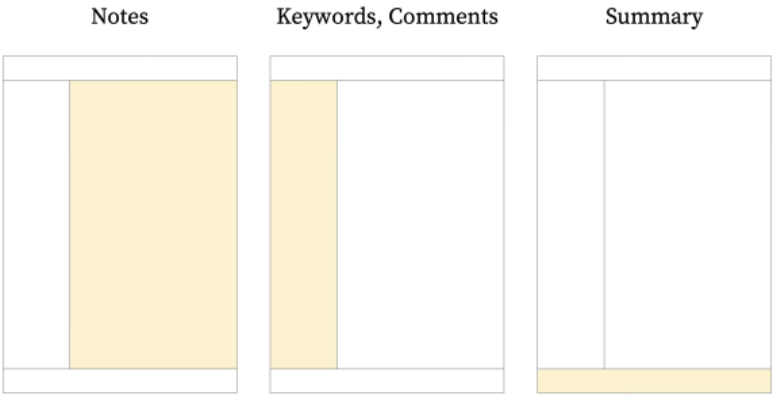
Want a bigger surface? Try using a giant white board to create a concept map.

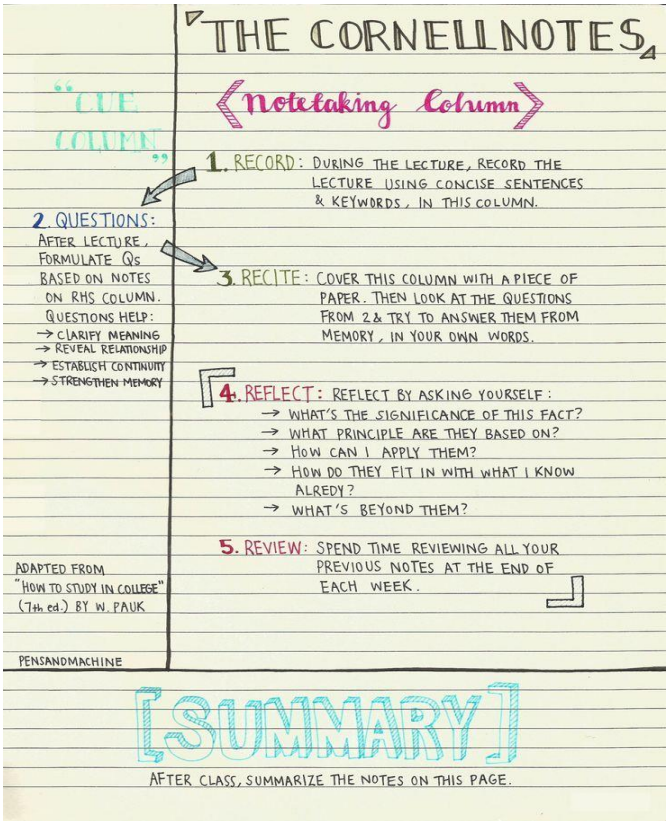




The Cornell Note-Taking Method

Students use the Cornell Method to take, organize, and review class notes. To practice this method, divide your pages into three main sections: notes, cues, and summary. See the below image for guidance on how to format the sections.





During class, take notes in the section for note taking. Try to be concise and focus on writing down key points, definitions, and other important concepts the professor shares.

After class, write down important cues, comments, or questions in the cues section.

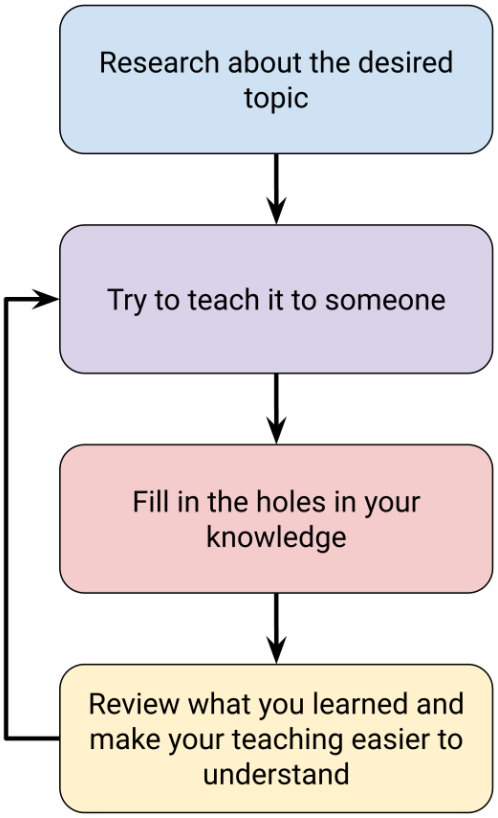
Finally, use the summary section to summarize the content on the page or add additional notes for the textbook that you want to have as a supplement.

The picture on the left is an example of how a page would be structured.

Elaboration (the Feynman Technique)

An easy technique to pinpoint gaps in knowledge. Students a

1. Select a topic
2. Practice recall - write down everything you know about a topic. Then in simple language, practice teaching the content to someone else or outloud to yourself.
3. Identify gaps in understanding - review what you remembered and identify gaps in material and understanding. Return to the textbook or lecture notes to clarify and fill in these gaps. Write down any corrections or elaborations.
4. Simplify language - make sure that all your language is simplified for ease of recall during future repetitions
5. Repeat process as needed

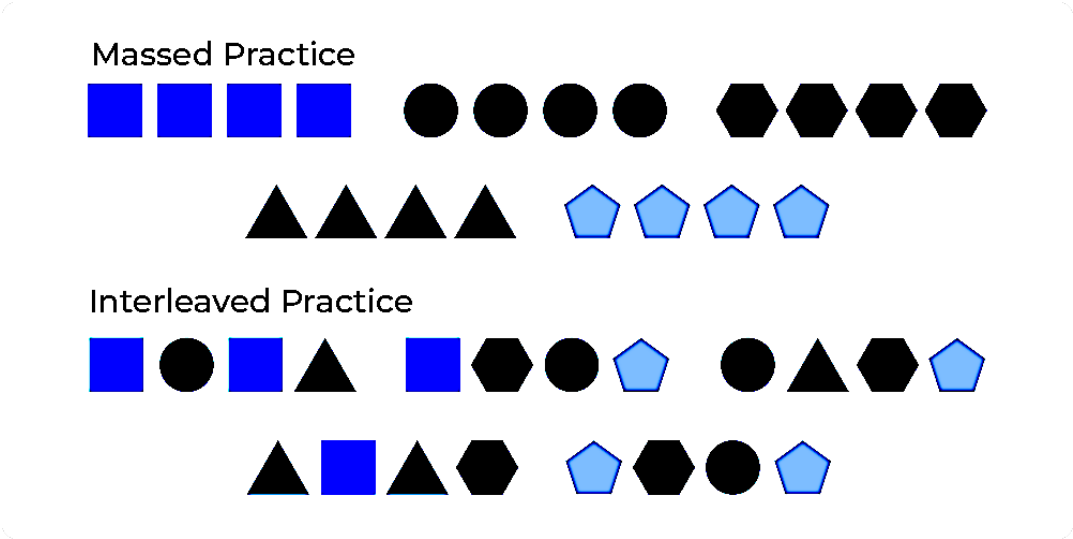


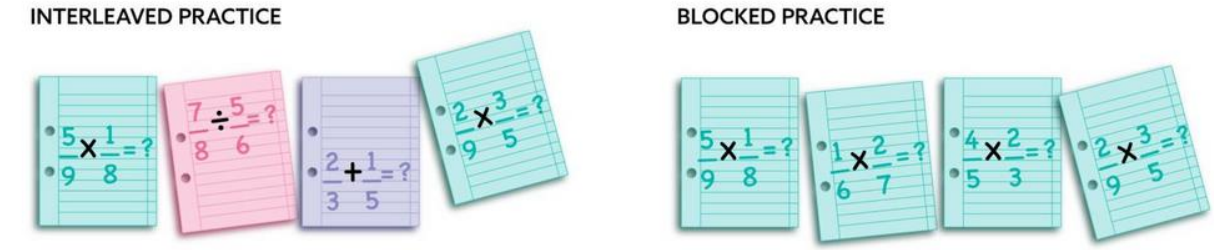
Interleaving

While studying a chosen subject, students alternate the types of practice problems and questions they solve or answer. Interleaving allows students to attend more to the individual concepts and decrease fatigue. Additionally, interleaving helps students build retention of understanding and promotes mastery of content long-term.

Studying the same concept for an extended period, or massed practice, can lead to mental blocks in memory once you switch to a new topic. Interleaving reduces the likelihood of “blocking” and, instead, allows students to remember concepts better.

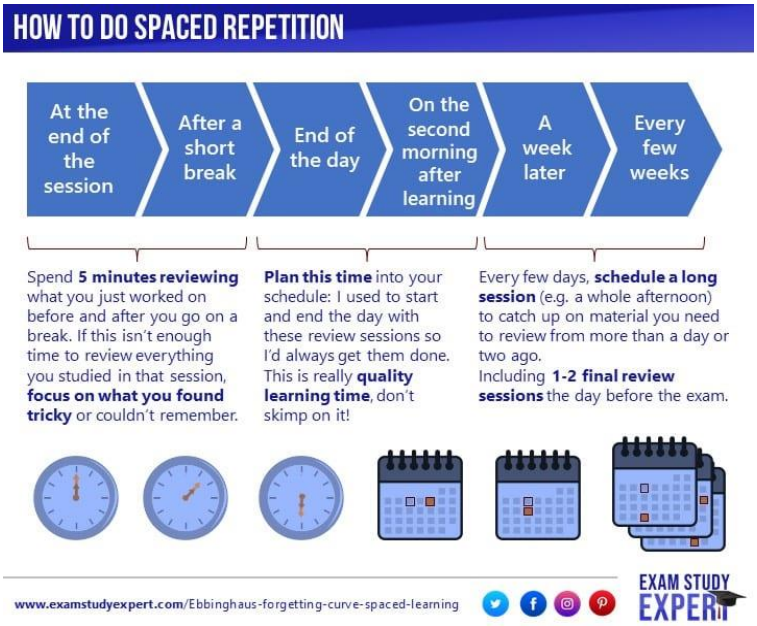
The differences between Interleaving and Massed Practice is illustrated below.

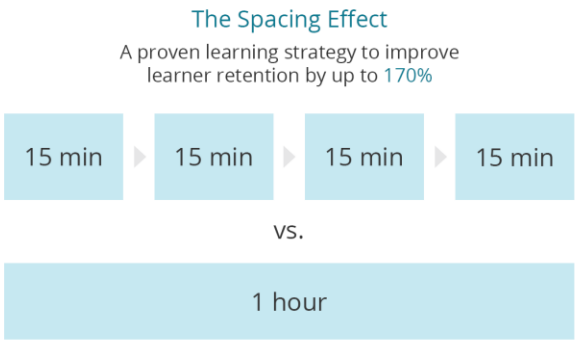




Spaced Recall

Research shows that spacing out the learning process has positive effects on transfer of learning and recall. Using Spaced Recall allows students to improve their mastery of content by increasing the amount of review time while maintaining space between study sessions to build retrieval skills.





Another tip is to study in 15 minute increments. Set a timer and work for 15 minutes, take a short break, and then repeat

Key Points: (information from Kang 2016)

- The timing or arrangement of review/practice affects learning.
- Practice is more effective when spaced out over time, instead of massed or grouped together (equating total practice time)
- Spaced practice enhances memory, problem solving, and transfer of learning to new contexts.
- Spaced practice offers great potential for improving students' educational outcomes.

Resource Links

Active Recall
https://www.goodnotes.com/blog/active-recall-studying

https://www.windsor.edu/active-recall-how-to-use-this-effective-study-technique-to-score-a-good-gpa/#:~:text=Active%20recall%20is%20a%20key,and%20improve%20your%20test%20performance.

Concept Mapping
https://link.springer.com/content/pdf/10.1007/s10648-014-9273-3.pdf

https://www.verywellmind.com/classical-conditioning-2794859

Concrete Examples
https://www.google.com/url?q=https://lsc.cornell.edu/how-to-study/concept-maps/&sa=D&source=docs&ust=1702045560095489&usg=AOvVaw2aD6csJcvncjEIOeWo58VX

The Cornell Note-Taking Method
https://thinkinsights.net/consulting/cornell-method-great-notes/

https://lsc.cornell.edu/how-to-study/taking-notes/cornell-note-taking-system/

Elaboration (The Feynman Technique)
https://www.bucknell.edu/sites/default/files/teaching_learning_center/feynmantechnique.pdf

https://www.colorado.edu/artssciences-advising/resource-library/life-skills/the-feynman-technique-in-academic-coaching

Interleaving
https://www.google.com/url?q=https://blog.alexanderfyoung.com/interleaving/&sa=D&source=docs&ust=1702051296701775&usg=AOvVaw07M2OT6ITH1q_ZOwh6jYO0

Spaced Recall
https://examstudyexpert.com/spaced-learning/

https://wm.primo.exlibrisgroup.com/discovery/fulldisplay?context=PC&vid=01COWM_INST:01COWM_WM_NEWUI&search_scope=WMCWF&tab=Everything&docid=cdi_scopus_primary_624945111