

SMART Learning Processes

- When developing a study strategy, you want to make sure it results in you understanding and remembering the information.
- Effective strategies help you perform these **SMART Learning Processes**: **S**earching, **M**onitoring, **A**ssembling, **R**ehearsing, and **T**ranslating (Winne, 2001).
- The more SMART processes a strategy allows you to do, the stronger it is.

Search (and Select)

- Searching is the process by which you retrieve useful information from long-term memory (Winne, 2001).
- Searching depends on the connections you have made between related pieces of information and these connections form a network that allows you to find relevant information more easily.
- Effective searching also depends on knowing what information you are looking for. **Selection** can help with this.
 - For example: Selection can involve taking a reading and zeroing in on the most important pieces of information in it or you might choose to highlight or underline important points.
- It is important to **practice** searching or retrieving from long-term memory.
- Often, we rehearse information without challenging ourselves to retrieve it from memory.
 - However, in a test situation, retrieval is exactly what you have to do! You can practice retrieval by quizzing yourself.
 - For example, you might make flash cards that have terms on one side and definitions on the other. That way, you can practice retrieving the definitions first, then check your answer.

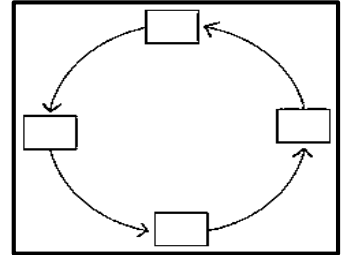
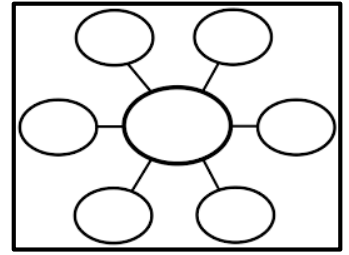


Monitor

- Monitoring your learning is critical, because it allows you to have a realistic idea of how prepared you are for a test or other evaluation.
- It also helps you decide if a strategy is actually working.
- It's more valuable to do this *while* you are enacting your strategies, rather than waiting for an outcome like a test mark. This way, you can adapt and improve your strategy as you go.
- Monitoring involves creating an ideal **standard** (what you hope to learn in a study session), and comparing this standard to your actual outcome (Winne, 2001).
- You might monitor your learning by testing yourself to see if you can recall information from memory (you would also be practicing searching at the same time!).
- For example, see if you can explain a concept to someone in a way that they can understand.

Assemble (and Organize)

- Information is stored in long-term memory in a network.
- Specific pieces of information are linked to other related pieces.
- Assembling is when your brain makes links between new and existing information in your long-term memory (Winne, 2001). This is essential for learning. We can help this process along by *organizing* information in a way that makes it easy to create these links.
- **Strategies:** *Graphic organizers* such as charts, tables, and diagrams are great ways to organize information for assembly. So are *mnemonic devices* like first-letter acronyms (for example, ROYGBIV for the colours of the spectrum). Another way to assemble information is to create a *summary* of the most important parts of a reading or lecture.



Rehearse

- Rehearsing allows us to keep information in our working memory, so it is ready to be used or added to at a moment's notice (Winne, 2001).
- There are two types of rehearsal: *maintenance rehearsal* and *elaborative rehearsal*.
 - **Maintenance** rehearsal is where you simply repeat the to-be-remembered information over and over again, without adding any new information.
 - **Elaborative** rehearsal actually combines assembling and rehearsing (Winne, 2001), allowing you to connect your to-be-remembered information with the existing networks in your long-term memory.
 - You might perform elaborative rehearsal by adding your own examples or counter-examples (what something is *not*) to definitions.

Translate

- Translation is when our brain changes information from one form into another. For example, you might take a description in words and turn it into a picture, or vice versa (Winne, 2001).
- You might also translate the information given to you in a lecture or textbook *into your own words*. This will make it more meaningful, which will make it easier to remember.
- **Potential Strategies:** Highlight to select important information, or summarize large amounts of information using your own words.

For more Information:

- Hadwin, A.F., & Webster, E.A. (2013). Calibration in goal setting: examining the nature of judgments of confidence. *Learning and Instruction, 24*, 37-47. doi: 10.1016/j.learninstruc.2012.10.001
- Winne, P.H. (2001). Self-regulated learning viewed from models of information processing. In B.J. Zimmerman & D.H. Schunk (Eds.), *Self-Regulated Learning and Academic Achievement: Theoretical Perspectives* (2nd ed.; p. 153-189). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Winne, P.H., & Hadwin, A.F. (1998). Studying as self-regulated engagement in learning. In D. Hacker, J. Dunlosky, & A. Graesser (Eds.), *Metacognition in Educational Theory and Practice* (277-304). Hillsdale: Lawrence Erlbaum.

Adapted from ED-D 101 Course Materials; Email edd101@uvic.ca for further information