

## Four Key Questions for Learning Success

Have you ever wondered what the most successful students do differently from other students? Students who have developed effective ways of learning have mastered a skill called metacognition.

### What is Metacognition?

In simple terms, metacognition is understanding your own thinking and learning processes. Metacognitive skills include planning your learning, monitoring whether your current learning strategies are successful, and evaluating results of your learning. Improving your metacognitive skills is associated with increased success in all of your academic life.

### Four Key Questions to Improve Your Learning

Key question	Other questions to ask yourself
What do I need to learn? (Planning)	<ul style="list-style-type: none"> <li>• What are the Learning Objectives for this class?</li> <li>• What do I already know about this topic?</li> <li>• What are the concepts I need to master before my next test?</li> <li>• What do I want to learn about this topic?</li> <li>• How do I distinguish important information from the details</li> </ul>
How am I going to learn the material? (Planning)	<ul style="list-style-type: none"> <li>• How can I integrate textbook reading with lecture notes?</li> <li>• What active learning activities will support my learning?</li> <li>• Will I study alone and/or with a study group?</li> <li>• What charts and visuals can I make to help me reorganize and process this material?</li> <li>• What memory strategies can I use to remember key words and concepts (flash cards, mnemonics)</li> <li>• How can I connect with my Instructor in office hours?</li> </ul>
How am I doing at learning the material? (Monitoring)	<ul style="list-style-type: none"> <li>• What concepts do I understand well?</li> <li>• What concepts are still confusing for me?</li> <li>• Can I explain the material to someone else without referring to notes?</li> <li>• Can I create and answer self-testing questions about these concepts?</li> <li>• What other strategies could I use to learn this material?</li> <li>• Am I using the supports available to me (e.g. office hours, tutors)?</li> <li>• How can I make this material more personally relevant to me?</li> </ul>
Did I learn the material effectively? (Evaluating)	<ul style="list-style-type: none"> <li>• To what extent did I meet the Learning Objectives for this unit?</li> <li>• What about my exam preparation worked well?</li> <li>• What in my exam preparation did not go well? What do I want to change?</li> <li>• How did my exam answer compare with the suggested answer? What key components did I miss?</li> <li>• How will what I have learned help me in my next courses?</li> </ul>

As you make a habit of regularly asking yourself these questions, you will grow in your understanding of what study practices work best for you. Regardless of the content or teaching style you encounter in each class, you'll be able to select strategies that effectively move you towards your goals.

#### References

Chick, N. (2017). Metacognition. Retrieved August 31, 2017, from <https://wp0.vanderbilt.edu/cft/guides-sub-pages/metacognition/>  
Tanner, K. D. (2012). Promoting Student Metacognition. *Cell Biology Education*, 11(2), 113–120. <https://doi.org/10.1187/cbe.12-03-0033>

