

Five Gears for CSUN Students

Motivating Learning

Motivation fuels learning: when you are motivated, you learn better. You can find motivation in any class by thinking about how it relates to your personal and career goals, by believing that with hard work you can be successful, and by seeking out support from other students, your instructors, and friends & family.

Connecting Prior Knowledge

Many of the ideas that you are currently learning have parts that are similar to things you have already learned. Build knowledge bridges between new material and what you've learned in the past. Working with these connections will speed up your learning of new material by integrating it with what you already know. But notice that college is also the place for you to challenge what you know, and to acquire new ways of thinking. When building a bridge isn't possible, celebrate: you're about to learn something completely new.

Organizing Knowledge

What does it mean for ideas to be “organized”? Try to figure out how your professor organizes the ideas, knowledge, and questions that s/he wants you to think about and understand, and how the textbook does this, too. Check to see how they align. Looking for key themes and underlying principles will help you recognize how individual ideas relate to one another, which helps you store and retrieve new knowledge more effectively.

Practicing with Feedback

Practice is important. Think about your favorite game, and how you reach the highest levels: through practicing and checking the hard parts. Coursework is not too different: if you concentrate your practice on the parts you don't know very well, you'll conquer them. Practice them frequently for short periods, not just once for a long period. And check your work as you go by comparing it to a model—answer keys, classmates' approaches, or the instructor's examples—so that you aren't practicing errors.

Developing Mastery

Given enough time, you can learn almost anything: skateboarding, making animated videos, successfully arguing your point, or solving quadratic equations, for example. But to develop mastery, you need to have full knowledge and understanding of your subject. You also need to monitor your performance, so you can figure out what to change—what works well and what doesn't. Time, knowledge, and self-awareness about what you know and what you still need to learn are the keys to mastery—to being good at what you do. And mastery will motivate further learning.

For more information about the Five Gears project at CSUN and *How Learning Works*, the book that inspired it, visit CSUN's Five Gears webpage:

<https://www.csun.edu/undergraduate-studies/academic-first-year-experiences/five-gears-teaching-learning-group-csun>