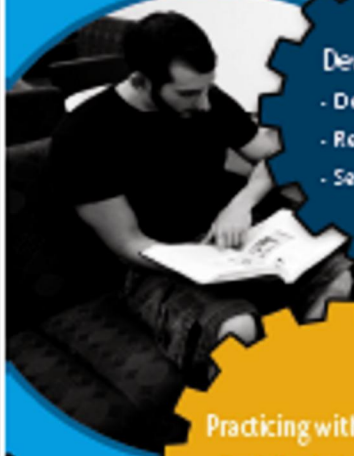
Five Gears for Activating Learning

Motivating Learning
- Course value
- Expectation for success
- Personal support

Developing Mastery
- Deep engagement
- Reflection
- Self-direction

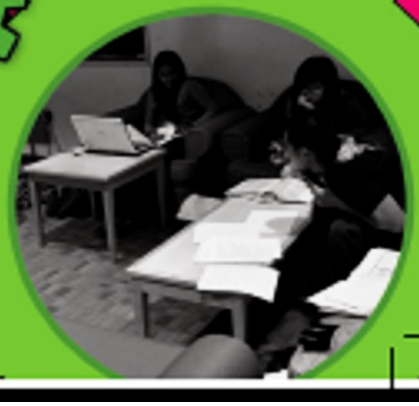


MASTERY

Organizing Knowledge
- Explicit structures

Practicing with Feedback
- Goal-directed practice
- Targeted feedback

Connecting Prior Knowledge
- Classroom learning
- Life experiences



The Teaching Learning Group

How Learning Works:
Techniques/Strategies for Implementation

Cynthia Desrochers

Through readings and discussions, CSUN's Teaching Learning Group distilled five research-based principles of learning that we suggest can become the language for CSUN to use in thinking and talking about teaching and learning with each other and with students. The following five principles—*gears for activating learning*—can be use by instructors to overcome obstacles to student learning in their courses.

Cultivate student **motivation** by highlighting the value of the course in class settings that are success oriented and supportive.

Build on students' **prior knowledge** and experiences.

Encourage the **organization** of knowledge in explicit structures.

Provide many opportunities for targeted **practice and feedback.**

Design for **deep learning** and progression to **mastery**.

To facilitate discussion and the application of these five gears to student learning, here is a brief list of techniques and strategies that instructors can us in designing learning experiences that have the potential of activating each gear with students.

Motivation

- Design an assignment that explicitly demonstrates the value of the course.
- Provide early success experiences and increase level of complexity throughout the semester.
- Allot class time for re-teaching and in-class problem solving with instructor's assistance.

Prior knowledge

- Use knowledge surveys to determine what students think they know and the depth of that knowledge.
- Use concept inventories to determine actual prior knowledge.
- Connect course concepts to examples, metaphors, and stories that will be familiar to students.

Organization

- Ask students to make outlines of course modules/units using key concepts.

Assign students the task of making a graphic organizer of a course module and/or the entire course.

Provide an expert's graphic organizer for students to analyze.

Practice and feedback

Design guided practice of historically difficult concepts and provide feedback.

Use weighed criteria charts, rubrics, and assignment wrappers.

Assign collaborative problem-solving sessions that include individual accountability (e.g., students work 20 minutes individually, 20 minutes in groups of four, and 20 minutes as a total class with the instructor—on the same problems).

Deep learning

Design your course to focus only on essential student-learning goals.

Implement deep-learning pedagogies, such as:

- Case-based teaching
- Team-based learning
- Learning portfolios
- Flipped instruction
- Community service-learning

Provide opportunities for students to direct their own learning (e.g., self-directed projects), followed by reflection and self-assessment on their performance.

Our common reading, *How Learning Works* (2010, Ambrose, et al.), provided the foundation for our yearlong discussions.

Matthew d'Alessio, Geology
Cynthia Desrochers, Education
Rashawn Green, Director, Learning Resource Center
Sharon Klein, English/Linguistics; Director, Writing and Reading across Disciplines
Daisy Lemus, Communication Studies; Director, Faculty Development
Michael Neubauer, Mathematics; Director, Liberal Studies; Vice Provost
Michael Rivas, Education (Secondary Education Department Chair)
Cheryl Spector, English; Director, Academic First Year Experiences

Five Gears for Activating Learning

Researched-Based Principles for Teaching and Learning

These principles are applicable to all models and modes of teaching and learning, whether online, hybrid, or in person.

Motivating Learning

Students feel motivated when the subject has personal value, they have expectations of being successful, and they feel supported in their learning by instructors and by other students. You can motivate learning by using class time to illustrate the value of a course, building in early success experiences, and providing support through re-teaching, extra-help sessions, and peer problem-solving sessions.

Organizing Knowledge

The explicit organization of knowledge in a course (or discipline) is necessary in order for students to retain, retrieve, and apply that knowledge. Students can benefit from analyzing the course map that has been created by an expert in the field and from making their own organizational structures.

Connecting Prior Knowledge

Students learn faster when a new concept is explicitly shown to be similar to a concept they have already learned in previous classes or through life experiences. Everything we teach has some component that students are familiar with that we can highlight to give students a starting place for new learning.

Practicing with Feedback

When students target their practice to focus on a new component or an area of weakness, and when they receive frequent and specific feedback, they learn better and faster. You may need to reduce or combine learning goals in order to permit sufficient practice on those that are most essential.

Developing Mastery

Mastery is developed through sustained (deep) engagement and self-reflection focusing on how and what is and is not being learned. Mastery also requires self-direction in designing one's own learning experiences—e.g., identifying the project topic, components, resources, and schedule, along with continual self-assessment.

California State University Northridge | CSUN SHINE

Project funded by the Michael D. Eisner College of Education and the Office of the Provost.

For more information, please contact us at teaching.learning.csun@gmail.com