Speaker: Dr. Stephen Chew

Title: The Cognitive Challenges of Effective Teaching

Audience: Faculty

Topic: Applying Cognitive Science to Foundational Course Design

Project track: Catapult Courses

Objectives:
- Teach faculty about the cognitive challenges that they and students must successfully negotiate for students to learn successfully, regardless of the pedagogy the teacher uses
- Show how these challenges are manifested in the classroom
- Suggest ways that faculty can try to address each challenge

Session Description

Learning is a complex interaction of multiple factors, all of which teachers have to understand to be successful. In this presentation, I will describe a research-based conceptual framework of cognitive challenges that teachers and students must negotiate for students to learn. It consists of nine interacting cognitive challenges that include student mental mindset, metacognition and self-regulation, student fear and mistrust, lack of prior knowledge, misconceptions, ineffective learning strategies, transfer of learning, constraints of selective attention, and the constraints of mental effort and working memory. After describing the challenges, I will recommend possible ways of addressing each one. The framework is context-dependent; what is effective for one situation may not be effective in others, and no single teaching method will always be optimal for all teachers, students, topics, and educational contexts. The framework can guide the design, implementation, and troubleshooting of teaching practice.

Speaker Bio

Stephen L. Chew is a professor of psychology at Samford University. Trained as a cognitive psychologist, his primary research interest is the cognitive basis of effective teaching and learning. Chew works to translate cognitive research for teachers and students. He developed a research-based framework of cognitive challenges that teachers must address to promote student learning. In 2011, he created a series of groundbreaking YouTube videos on how to study effectively that have received millions of views. Chew is the recipient of multiple national recognitions for his teaching and research, including being named the 2011 U.S. Professor of the Year.

Materials and Links:
1. https://www.laregents.edu/wp-content/uploads/2025/03/The-cognitive-challenges-of-effective-teaching-Chew-Cerbin-2020.pdf

2. https://www.laregents.edu/wp-content/uploads/2025/03/Chew_We-Can-Do-Better-Than-Best-Practices.pdf

3. https://www.laregents.edu/wp-content/uploads/2025/03/Chew_Teaching-Students-How-to-Study.pdf

4. https://www.laregents.edu/wp-content/uploads/2025/03/Chew-Advance-Organizer-2021.pdf