Washington State University

College of Education, Sport and Human Sciences

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Will defend their dissertation on

Date: April 3, 2026
Time: 10:00 A.M.

Pullman Campus – Cleveland Hall, Room 353

Faculty, students and the general public are encouraged to attend

Title:

SELF-REGULATION IN ACTION: PROFILES AND PROCESSES OF LEARNING AMONG UNDERGRADUATES IN STEM

Chair: Kira Carbonneau

Abstract:

Success in undergraduate STEM education requires students to regulate their learning in the face of cognitively demanding coursework. Although self-regulated learning (SRL) has been widely studied, less is known about how regulatory and motivational characteristics co-occur within students and how those patterns shape self-assessment practices. This dissertation examined profiles and processes of learning among undergraduates in STEM. Study One used latent profile analysis to identify patterns of self-regulated learning, academic motivation, and academic self-efficacy. Two profiles emerged: a High SRL-Motivation profile and a Low SRL-Motivation profile. Students in the High SRL-Motivation profile reported significantly higher grade point averages than those in the Low SRL-Motivation profile, suggesting meaningful associations between regulatory patterns and academic performance. Study Two used semi-structured interviews to explore how students in these profiles engaged in formative and summative self-assessment. Students in the High SRL-Motivation profile described ongoing, process-oriented self-assessment, whereas students in the Low SRL-Motivation profile relied more heavily on outcome-based verification and external indicators of performance. Together, these findings suggest that self-regulation in STEM reflects broader patterns of motivational and evaluative processes and highlight implications for supporting students navigating demanding academic contexts.