



December 9th, 2020
Dr. Julie Stanton



Metacognitive Regulation: How Undergraduate Students Evaluate and Adjust their Approaches to Learning in Science

Students with awareness and control of their own thinking can learn more and perform better than students who are not metacognitive. Metacognitive regulation is how you control your thinking in order to learn. It includes the skill of evaluation, which is the ability to appraise your approaches to learning and modify your plans based on those appraisals. Metacognitive skills can have a significant impact on learning and performance, but many undergraduate students are still developing these abilities. We need to understand the important changes that occur as students acquire these skills in order to help them develop their metacognition more effectively. In this interactive seminar, I will share results from our recent metacognition studies. *These findings have particular relevance for student learning during the pandemic, because students use metacognition when they face novel challenges.*

We used the task of preparing for an exam as a way to explore the metacognitive skills undergraduate students use to learn in the sciences. We analyzed data from life science students' self-evaluation assignments and research interviews. From this analysis, we proposed a continuum of metacognitive development in introductory life science students. We also gained insights into when, why, and how upper-division students evaluate their approaches to learning, and the barriers these students face when they try to change their plans based on their evaluations. These data have implications for how undergraduates learn in science. Together we will discuss evidence-based suggestions for instructors who want to help improve student metacognition.

Julie Dangremond Stanton is an Associate Professor of Cellular Biology at University of Georgia. Although she was trained as a cell biologist, Dr. Stanton's passion for helping students learn led her to pursue biology education research as a faculty member. In her primary research area she investigates the metacognitive development of undergraduate life science students. In addition, Dr. Stanton studies the strengths of Black and African American students science majors and the self-advocacy experiences of students with learning disabilities in STEM. She is the PI of two NSF grants for biology education research, including a CAREER award to study metacognition. Through her teaching and research, Dr. Stanton is dedicated to helping undergraduates learn biology and persist in life science majors.

Topic: ROSE Seminar on Metacognition (Julie Stanton)

Time: Dec 9, 2020 12:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

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Meeting ID: 914 4574 4164

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