



**Title of Project:**

Scientific Inquiry as Social and Linguistic Practice: Language Socialization  
Trajectories of English Learners in an 8<sup>th</sup> Grade Science Class

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**Project Summary:**

Language minority students including English Learners (ELs) are underrepresented in STEM (science, technology, engineering, and mathematics) fields in the United States. Providing equity in access to STEM degrees and professions is an important educational goal because STEM careers provide opportunities for upward economic mobility. Traditional approaches to resolving equity issues for K-12 ELs in the sciences have focused on helping science teachers develop pedagogical skills aimed at improving EL student performance in science classes. However, language socialization research suggests that students' classroom-based social positioning also has a powerful influence on ELs' language and content learning and ultimately on their affiliation or disaffiliation with learning science. In my dissertation research, I use a language socialization framework and a trajectory-based approach to explore how four ELs in one 8<sup>th</sup> grade science classroom become socialized into or out of using science discourse over the course of one semester. I explore the ways in which the students' identities (i.e., their social identification) during scientific inquiry tasks shapes their use of science discourse (i.e., the language of science) and correspondingly their opportunities to develop scientific language and content knowledge. To conduct this microethnographic case study, I partner traditional ethnographic methods with a semiotic approach to classroom discourse analysis. Effective methodologies for science teachers who work with English learners must include how pedagogical and interactional practices socially position language learners in ways that either support or constrain their access to academic success.