Chapter 8
Educator Preparation Programs and the Use of Culturally and Linguistically Sustaining Pedagogies in Science Methods Courses

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ABSTRACT

This chapter provide one example of ways in which one teacher educator program integrated Culturally Sustaining Pedagogies and Linguistically Sustaining Pedagogies into STEM-based pedagogies and mentored teacher candidates in the implemen-

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tation of these pedagogies during a STEM-based academic enrichment program for emerging multilingual 4th through 8th grade students, the majority of whom identified as Latinx. Through this chapter, we explore the challenges and successes of refocusing educator preparation on developing pedagogies and approaches to education that support, sustain, and cultivate the idea of "rightful presence" with emerging language learners (Calabrese-Barton & Tan, 2020). This project is part of a National Science Foundation grant (Award #2121351) entitled Culturally Sustaining Pedagogies in Science for English Learners (CUSPELL), which includes both a science methods course for teacher candidates and a summer component for 4th - 8th grade language learners.

INTRODUCTION

In "Culturally Sustaining Pedagogy: A Critical Framework for Centering Communities," the authors encourage readers to ask the question, "What would our educational contexts look like in a world where we owed no explanations, to anyone, about the value of our children's culture, language and learning potential?" (Alim et al., 2020, p. 262). In relation to STEM education, in particular, we are challenged to envision a world in which historically marginalized and underrepresented students have a "rightful presence" in the classroom, a challenge that "focuses on the processes of reauthoring rights towards making present the lives of those made missing by the systemic injustices inherent in schooling and the disciplines" (Calabrese Barton & Tan, 2020, p. 436). In envisioning what such a world could look like, Calabrese Barton and Tan (2020) further probe, "How might educators be supported in learning to teach in ways that promote a more rightful presence for minoritized students?" (p. 438). In this chapter, we seek to provide an example of ways in which one teacher educator program integrated Culturally Sustaining Pedagogies (CSP) and Linguistically Sustaining Pedagogies (LSP) into a STEM-based pedagogies course and mentored teacher candidates in the implementation of these pedagogies during a STEM-based academic enrichment program for emerging multilingual 4th through 8th grade students, the majority of whom identified as Latinx. In this chapter, we explore the challenges and successes of refocusing educator preparation—science education, in particular— on developing pedagogies and approaches to education that support, sustain, and cultivate the idea of "rightful presence" with emerging multilingual learners.