

Cultivating a Science Identity in Underrepresented Students Through Near Peer Mentoring

Why students of color are disproportionately underrepresented in science, technology, engineering, and math (STEM-related) career pathways remains a persistent problem. Certain forms of mentoring have demonstrated efficacy at supporting underrepresented students in cultivating a science identity (Pluth, Boettcher, et al., 2015; Tenenbaum, Anderson, Jett, & Yourick, 2014). In particular, near peer mentoring has emerged as a promising alternative to traditional forms of mentoring. In contrast to traditional mentors, near peers are just a few years older than mentees and thereby enjoy a shared language and greater degree of closeness (Zaniewski & Reinholz, 2016).

Identity-based motivation theory (IBM) (Oyserman, 2015) provides a theoretical framework for this study. IBM theory posits that individuals interpret situations in ways that are congruent with their currently active identities. Thereby, a mentee who connects with a near peer mentor may experience a high degree of cognitive congruence, that in turn will positively influence identity development and motivation.

This research reports on interim findings from a National Science Foundation-funded study on the efficacy of near-peer mentoring to promote motivation and identity development among students from groups underrepresented in STEM fields. The researchers facilitated a weeklong summer science mentoring program that paired career-curious high school mentees with undergraduate near peer mentors. Designed to capture unscripted authenticity (Robin, 2008), digital storytelling (DST) was used to document unscripted, authentic interactions between mentor and mentee as they worked together in laboratories, participated in conducting experiments, and shared meals together. The presentation features video highlights and themes that emerged from the study.

Keywords: STEM diversity, near-peer mentoring, identity-based motivation, digital storytelling

References

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