

Improving Diversity in STEM Education: Universal Design for Learning and the LEVEL Model

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Abstract

Within the global business environment there is a critical need for a diverse pool of employees with higher education degrees in the fields of Science, Technology, Engineering, and Mathematics (STEM). Unfortunately, in the United States STEM degrees are usually awarded to male, Caucasian graduates. This paper will provide clarity on why diversity in STEM careers is important to the United States' economic sustainability and competitiveness, explain the major challenges and barriers to degree attainment in STEM disciplines especially for marginalized groups, and demonstrate how Universal Design for Learning (UDL) strategies linked with the LEVEL instructional model, can promote diversity and help correct the racial and cultural disparity in STEM degree attainment and employment.

Keywords: STEM, Universal Design for Learning, instructional design, diversity, learning styles, marginalized, LEVEL Model