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[Prev.](#) | [Next](#) | [Table of Contents](#)

PLTL: Tracking the Trajectory from Face-to-Face to Online Environments

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Abstract

Over the past three years, an interdisciplinary team of investigators, led by Varma-Nelson, has worked to adapt the Peer-Led Team Learning (PLTL) instructional model to a cyber-environment (aka cPLTL). PLTL is a pedagogy that preserves the lecture and replaces the course recitation with a weekly two-hour workshop in which six to eight students work collaboratively to solve challenging problems under the guidance of a peer leader. cPLTL is the "cyber" evolution of PLTL to an online format. The team's work represents a new direction for educational research and expands the knowledgebase on teaching science, technology, engineering and mathematics (STEM) concepts, while using technology as an educational tool. With funding from the National Science Foundation (NSF) and the Next Generation Learning Challenges (NGLC) initiative, the team is examining cPLTL's impact on student performance. Analysis of course grades and standardized exam scores has shown cPLTL's positive impact on educational outcomes. This chapter traces the evolution of a pedagogy developed for the face-to-face classroom environment to an online platform. Specifically, it outlines the rationale that led to the development of cPLTL; describes how technology was integrated into the PLTL model; summarizes its effectiveness, outcomes, and lessons learned; and speculates on the future use of cPLTL.

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