

English Language Development in the STEM Classroom through Inquiry-Based Learning

¹Dr. Diane Boothe, ²Dr. Melissa Caspary

¹Boise State University, USA

²Georgia Gwinnett College, USA

Abstract

Education is undergoing rapid transformation and there is a shortage of qualified graduates in science, technology, engineering and mathematics (STEM) fields essential to economic growth. The contemporary language educator is being challenged to focus on rich interdisciplinary experiences including integration of STEM content and English language proficiency. An emphasis on STEM disciplines and innovative language learning environments that are connected, and collaborative are crucial as employers expect a broad range of transferable competencies to prepare students for the global workforce. Inquiry-based learning continues to be at the forefront of best practices as educators strive to build a culture that fosters innovation and revitalizes the learning experience. Our research focuses on the impact of Inquiry-based learning in STEM fields to support English language acquisition and strengthen the impact of collaboration and teamwork on the learning environment. The research and full-text paper focuses on incorporating Inquiry-based learning across the STEM curriculum while simultaneously strengthening the English teaching and learning process. Educational programs in the United States and Europe are compared and contrasted, including two different styles of English education structured in a comparative analysis using the four stages of Inquiry-based learning. The opportunity to investigate the experiences of educators who focus on the multidimensional aspects of the education of multilingual learners provides valuable information that contributes to expert teaching and learning and bridges the gap between educating STEM and English learners. In conclusion, embracing English language learning, STEM, and initiating change through Inquiry-based learning will lead to relevant and purposeful accomplishments.

Keywords: collaboration; cross-disciplinary; English learning; innovation; science education