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Cover Page Footnote

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Visual storytelling of scientific data: collaborations between physics and graphic design in the college classroom

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Abstract

The Common Problem Pedagogy (CPP) project, a learning initiative implemented in four SUNY schools, aims to provide students with multidisciplinary, project-based experiences, and to foster a culture of such pedagogy among faculty. This work describes one CPP project that was conducted at SUNY Cortland during the Spring 2019 semester that brought together students from physics and graphic design disciplines. The goal of this project was to identify issues of environmental and social concern, develop numerical models to represent the effects of possible policy actions, and to communicate the meaning of this work as infographics suitable for a non-expert, public audience. This article discusses the project structure and organization, the numerical modeling work, the design process and creation of infographics, concluding with reflections on the points of success and plans for further development.

Section 1: Introduction

An important component of a liberal arts education is a curriculum that widens students' capability to understand different perspectives, create connections between disciplines, and form interconnected concepts of the world (Holley, 2009). Many institutions of higher education have embraced project-based pedagogy as a method for encouraging an adaptable problem-solving framework in students, and to deepen their valuation of other ways of thinking and interacting. Such projects often require students to produce work spanning concept development, planning, initiation, and reporting – a broad range of activities that require a diverse skillset. Fink (2013) discussed common pitfalls of traditional learning styles: “Research has shown that [lecture] learning results in most students not being able to recall this information even a short time later” (p.7). Communication is often central to project-based learning, including inter-personal and written communication, both of which are central to a wide range of problems and work spanning the mundane to the highly impactful.