

January 31, 2019

Dear *Visualizing the Future* Organizing Committee,

About Me & MSMU

I am the Digital Initiatives Librarian at Mount Saint Mary's University in Los Angeles. Mount Saint Mary's University (MSMU) is a Catholic university primarily for women, and provides an enriched education in the liberal arts and sciences to a diverse student body. Enhanced by an emphasis on building leadership skills and fostering a spirit to serve others, MSMU's curriculum is devoted to preparing students to engage in, and better the world. The student body consists of 90% women and 60% Hispanic/Latinx students, more than half of which are first-generation college students. MSMU is designated as an Hispanic Serving Institution (HSI).

Currently, I am in the process of designing and producing a new website for the MSMU Libraries. The new site's research pages will include sections devoted to the collection and use of community health data, human-subject and data-driven research, evidence-based practice (EBP) in nursing and physical therapy, as well as other various types of health science data. The new website will also include a section devoted to data visualization. Following the unveiling of the new site, I hope to be able to provide reference and instruction regarding data visualization for both the humanities and the sciences.

Project Proposal

For my project, I am interested in researching and developing a set of criteria and/or guidelines for the creation of data visualization in relation to community health data. The focus of these guidelines would be to establish methods for creating community health data visualization and to communicate the nuance and ethical implications of revealing disparities

among diverse communities. The purpose of the guidelines would be to establish the responsibility a researcher takes on as a visual storyteller, especially concerning the decisions made when manipulating health data. My further intent in creating these guidelines would be to engage students' critical analyses in asking the appropriate questions of the data, and then translating those questions into meaningful visualizations.

For community data, all matter of charts, graphs, timelines, and scatter plots, etc. may be useful, but for this first project, I will focus on mapping and GIS functions. Additionally, the goal of the guidelines would be help students identify and avoid biases prevalent in all types of visualizations, but especially those present in mapping visualizations, which are easily distorted.

My focus on community health data would support the largest academic departments at MSMU including, but not limited to, the nursing, psychology, sociology, political science, health policy, and physical therapy departments. In addition, my focus on mapping and GIS visualizations will support both the GIS and geospatial criminology departments. I have met with various faculty who are interested in having their students conduct and present data-driven research projects, and I would like to develop the necessary supporting instruction to aid them in the visual presentation of their findings. This goal supports both my work as the Digital Initiatives Librarian at MSMU, as well as the MSMU Libraries' mission of providing supporting instruction for digital scholarship and data-driven research.

Logistics & Methodology

For my pilot project, I would like to review the community health data module of *Policy Map – GIS Mapping and Geographic Information System Data*, which is an interactive software tool that allows researchers to map data in an illustrative and meaningful way. Designed as an “easy-to-use mapping and reporting tool for data on community-level demographics, health outcomes, housing conditions, transit access, environmental conditions and more” the

community health module of Policy Map may help our students explore the social determinants of health. MSMU Libraries' has written the purchase of this software into a pending grant, but my director has agreed to purchase the software if it is needed earlier. With this module I will be able to explore various geographical datasets including race and ethnicity, prevalence of disease, insured and uninsured populations, as well as access to health care, hospitals and supermarkets. In this project, I will focus specifically on Latinx populations in Los Angeles and California, as this has been an exceedingly popular topic among our students in the last few years.

From this exploration and creation, accompanied by scholarly research in the burgeoning data visualization field, I wish to develop specific guidelines and criteria that will be helpful to students, not only in the creation of data visualization, but in the responsible, unbiased communication of disparity.

Deliverables

- A brief literature review in developing data visualization guidelines
- Sample data visualizations using community health data and GIS mapping tools
- A draft of guidelines, criteria, and ethical considerations that could be “scaffolded” to accommodate more types of data

Thank you for your consideration,

Amy Sonnichsen

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