

## Executive Summary

# Teaching with Quantitative Data in the Social Sciences at the University of New Hampshire

*An Ithaka S+R Local Report*



## Introduction

The University of New Hampshire (UNH) Library conducted an exploratory study of the pedagogical practices of social science instructors at UNH who teach using quantitative data in undergraduate courses. This study is connected to a suite of parallel studies being developed locally at other higher education institutions and coordinated by Ithaka S+R.

For the UNH study, the research team recruited eleven participants through convenience sampling for one-on-one interviews. The study sample included lecturers, assistant professors, associate professors, and full professors across seven social science disciplines from the Durham and Manchester campuses.

## Study Aims

- Explore the ways in which instructors teach and engage undergraduates in the social sciences using quantitative data
- Understand the support needs of these instructors
- Develop actionable recommendations for campus stakeholders
- Identify opportunities for the development of resources, services or activities in the library to support the use of quantitative data in the classroom

To download full report: <https://dx.doi.org/10.34051/p/2021.39>

## Findings

Courses using data provide a unique opportunity for students to gain experience by working with hands-on examples. The two overarching themes identified speak to the motivations of instructors who teach with data and the challenges and opportunities they face.

### **Teaching with data for data literacy and scientific literacy**

This theme centers on introducing or strengthening a broad set of foundational skills students need to be successful. These include a wide range of competencies connected to critical thinking, from essential information and data literacies to understanding scientific methodologies.

### **Teaching with data for statistical, data, and tools skill building**

This theme focuses on working with datasets and the development of skills such as understanding statistical concepts, variables and measurements, and tools for working with data. Also emphasized are barriers faced by students and strategies instructors employ to help students overcome those barriers.

## Recommendations

Based on the findings, the research team proposes the following initial recommendations, which include collaborative actions that campus stakeholders can take to better support social science instructors teaching with data.

**Recommendation 1:** Provide support for instructors in locating and sharing data for teaching

**Recommendation 2:** Provide support for students who need extra help with math and statistics

**Recommendation 3:** Provide enhanced software support for both students and instructors

**Recommendation 4:** Provide learning opportunities for instructors on teaching with data, student skills retention, and new research methodologies and data analysis and visualization practices

**Recommendation 5:** Enhance library support for teaching with data and foster partnerships with campus stakeholders to explore recommendations 1-4

## Conclusion

Data literacy is an important set of competencies in part because of the quality and quantity of data students encounter; they need to have the ability to critically evaluate data, methods, and claims. This study directed attention to an area that had not previously been focused on at UNH and is an important first step toward creating greater awareness and community of practice for social science instructors teaching with data. Investigating questions about teaching undergraduate students to work with data was illuminating to the participants and the research team. The UNH Library offers research data services and is exploring new ways of supporting data literacy. UNH has opportunities to create additional supports for instructors and students that could improve student learning outcomes. Such efforts may require cross-college or cross-department coordination as well as administrative support.



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