**Evidence Based Library and Information Practice**

**An Action Research Approach helps Develop GIS Programs in Humanities and Social Sciences**

**A Review of:**
Kong, N., Fosmire, M., & Branch, B. D. (2017). Developing library GIS services for humanities and social science: An action research approach. *College & Research Libraries, 78*(4), 413-427. http://dx.doi.org/10.5860/crl.78.4.413

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**Abstract**

**Objective** – To develop and improve on geographic information systems (GIS) services for humanities and social sciences graduate students and faculty members using an action research model.

**Design** – Case study.

**Setting** – A public research university serving an annual enrollment of over 41,500 students in the Midwestern United States of America.

**Subjects** – Faculty members and students in the humanities and social sciences that expressed interest in GIS services.

**Methods** – An action research approach was used which included data collection, analysis, service design, and observation. Interviews with eight individuals and groups were conducted including four faculty members, three graduate students, and one research group of faculty and graduate students. Data from interviews and other data including emails and notes from previous GIS meetings were analyzed and the authors used inductive and axial coding to interpret data and organize it into thematic areas. This analysis was used

to develop an action plan for the library, then the results of the activity were assessed informally.

**Main Results** – The interviews revealed three thematic areas for library GIS service: research, learning, and outreach. The authors generated library service connections for each of these areas including providing data plan design support and server space to enable future collaboration. The action plan developed by the authors resulted in increased engagement including active participation in an annual GIS day, attendance at workshops, course-integrated GIS sessions, around 40 consultations on GIS subjects over a two-year period, and increased hits on the library's GIS page. Surveys from pre- and post-tests in the workshops increased participants' spatial awareness skills.

**Conclusion** – Using an action research approach, the authors were able to identify needs and develop a successful model of GIS service for the humanities and social sciences.

**Commentary**

This article examines a method for moving GIS services forward in an academic library. This function in libraries is not new; large scale efforts to integrate GIS literacy and service have been associated with libraries since the early 1990s (Argentati, 1997). The practice of providing these services has changed over time and this study is well-situated to scale existing GIS programs to new disciplines and help librarians develop the audiences and resources they have cultivated through GIS work.

The study employs an action research model which functions as a cycle to continuously produce insights, convert those insights to actions, and analyze the results of those actions. The original interview pool was small at eight participants who were not randomly chosen, but the researchers felt this was sufficient because of the specialized scale of GIS work in the humanities and social sciences on campus and strong repetition in the themes of the responses. This repetition could indicate

that the interview was representative of all patrons engaged in GIS work in the humanities and social sciences and therefore meets the requirements of the critical appraisal (Glynn, 2006). The authors used Data Curation Profiles to develop content for the participant interviews which they felt helped structure the interviews away from personal research interests and towards more generalizable data on participants' needs and expectations. The use of action research in this study was a unique choice and was effective for the goals of the authors. A future cycle of this method could be used with more formal outcomes assessment and a bigger sample size to deepen practice in this area.

These interviews allowed the authors to structure an action plan for library service. The impact of a holistic approach like this, which includes increased outreach, development of learning objects and activities, and the restructuring of a service program, is extremely difficult to measure. The authors provide both qualitative and quantitative indicators in the results, but a clearer picture of the impact of these efforts might emerge in subsequent publications.

This article strongly positions the library as a purveyor of this interdisciplinary service, particularly for institutions that do not have geography programs, and provides a good structure for scaling GIS services to the humanities and social sciences. The activities outlined in the article require relatively high levels of investment and expertise in GIS, so they may not be relevant to institutions that are just embarking on this service, but libraries with existing investments and mature GIS programs will find a robust outline for expanding these programs toward humanities and social sciences researchers.

**References**

Argentati, C. D. (1997). Expanding horizons for GIS services in academic libraries. *The Journal of Academic Librarianship*, *23*(6), 463-468. http://dx.doi.org/10.1016/S0099-1333(97)90170-1

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