How to easily incorporate evidence-based librarianship into your professional practice

April Cunningham, Instruction Coordinator, Saddleback College
Stephanie Rosenblatt, Instruction Coordinator, Education Librarian, California State University, Fullerton

Abstract

Librarians work in a world that is increasingly data-driven and one in which data is easy to obtain. This preconference introduced librarians to the concept of action research -- research done by the practitioner in order to improve her working conditions or efficacy. It also exposed participants to a variety of data analysis techniques and the habits of mind necessary to tackle ill-defined problems using systematic methods. Action research empowers the practitioner by recognizing her own expertise. It is a way to create or improve best practices and to challenge commonly held "truths" that have been unsubstantiated. Strengthening librarians' abilities to use empirical methods to investigate processes and practices allows librarians to make more informed decisions in their workplaces and to communicate with campus stakeholders in more compelling ways.

Introducing Action Research

Action research is inquiry conducted by practitioners in order to solve problems or to investigate phenomena she has noticed in the course of her working life. The initial research question may be developed by the researcher alone or may come out of conversations with colleagues. The researcher talks about the problem with colleagues or "critical" friends in order to hone her question and to develop a methodology to investigate it. The researcher shares news about her progress in collecting and analyzing data with the same group of people in order to benefit from additional perspectives. The researcher shares what she has learned with the same group, and perhaps a wider audience, formally or informally.

The goals of action research are to empower the practitioner to become an expert in her work. It is also a way to create or improve "best practices" and to challenge institutional or professional assumptions.

Figure 1: The Action Research Cycle

History of action research

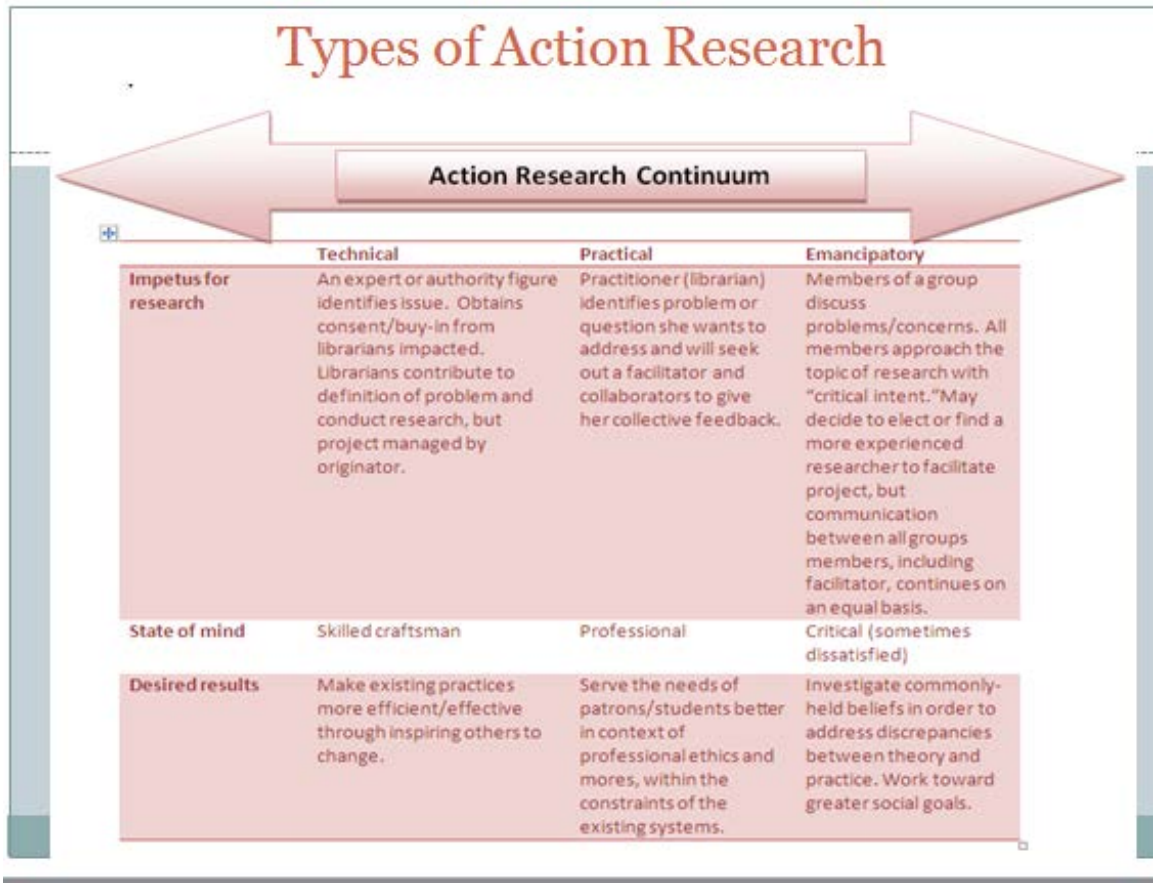
Action research was first described by Lewin, a psychologist, in the 1940s, although the process employed was used prior to this time (Elliott, 1988). It was adopted by a number of fields, including education, because it was believed that social practices would only change if practitioners were involved in their investigation. By the end of the 1950s there was an increase in professional researchers in education so the

action research methodology fell out of popularity until the 70s when it was referred to as the teacher researcher movement, (Dana & Yendol-Hoppey, 2009). Reviewing the impact on teachers and educational research reveals parallels between teachers' and librarians' work.

Teachers, like librarians, are usually autonomous agents. They are expected to act as experts and professionals, to be masters of all of their job duties. However, they work within bureaucratic systems and are subject to various dictates that are beyond their control. The majority of the time, teachers have been the subjects of study or were technicians, asked to implement a curriculum correctly so that outside experts could measure the impact on student learning. Through action research, the teacher became the researcher instead of the subject – a professional is allowed to act as such. Allowing teachers and librarians to leverage their expert knowledge in order to serve their clients better will improve their professions and institutions. This can be done within existing constraints, but, because it's collaborative, action research also offers a way for practitioners to completely alter the system from the bottom up.

Types of action research

Three types of action research have been described in the literature: technical, practical, and emancipatory (Grundy, 1982). These types were presented as a continuum as most librarians find themselves sliding along the scale based on the problem being investigated, their personality type, and the culture of their institutions.



	Technical	Practical	Emancipatory
Impetus for research	An expert or authority figure identifies issue. Obtains consent/buy-in from librarians impacted. Librarians contribute to definition of problem and conduct research, but project managed by originator.	Practitioner (librarian) identifies problem or question she wants to address and will seek out a facilitator and collaborators to give her collective feedback.	Members of a group discuss problems/concerns. All members approach the topic of research with "critical intent." May decide to elect or find a more experienced researcher to facilitate project, but communication between all groups members, including facilitator, continues on an equal basis.
State of mind	Skilled craftsman	Professional	Critical (sometimes dissatisfied)
Desired results	Make existing practices more efficient/effective through inspiring others to change.	Serve the needs of patrons/students better in context of professional ethics and mores, within the constraints of the existing systems.	Investigate commonly-held beliefs in order to address discrepancies between theory and practice. Work toward greater social goals.

Figure 2: Types of Action Research

These types of research are determined by the state of mind of the researcher, the impetus for the research, and the desired result. In technical action research, the desired result is to make existing practices more efficient. The research may be requested by a supervisor who will seek buy-in from the librarians impacted. In practical action research, the librarian provides the impetus for the research and is driven by professional ethics to make changes that will benefit the library's patrons. In the emancipatory model, a group

of practitioners begins the research with the goal of fostering major structural change to policies or procedures that seem unfair or unethical, or to question or deflate long-held, unsubstantiated assumptions.

The Methodology Interlude

In action research, most practitioners will approach data collection and analysis in the ways that feel most natural to them, but there are concepts librarians can adapt from formal research that will help them think beyond their intuitive approaches. In particular, librarians should strongly consider using mixed methods in their studies because they can then benefit from the best of quantitative and qualitative research techniques. A mixed methods approach can guide the research design from the start or it can inform librarians' decisions about how to analyze their data after they have already gathered or generated it. The following considerations should guide librarians' action research:

Goals for the research

Librarians must decide how they want to be able to use the results of their studies. Quantitative methods result in descriptions of what is happening. Qualitative methods result in explanations of why something is happening or how it is being experienced by the people involved. By mixing descriptive and explanatory data, librarians can develop action research that has the potential to help them identify strengths, weaknesses as well as their underlying causes.

Types of data

Librarians should also take time to identify the existing data available to them and the types of data they could gather or generate easily. Existing quantitative data may include circulation statistics, orientation assessments, reference statistics, and satisfaction surveys. It is less common that librarians have access to qualitative data—such as open-ended surveys, interviews, and focus groups—before the beginning of the study.

Relationships among the data

Mixed methods designs combine qualitative and quantitative data in a number of ways. Figure 4 illustrates the four common designs for mixed methods studies that Creswell and Clark (2007) described in *Designing and Conducting Mixed Methods Research*.

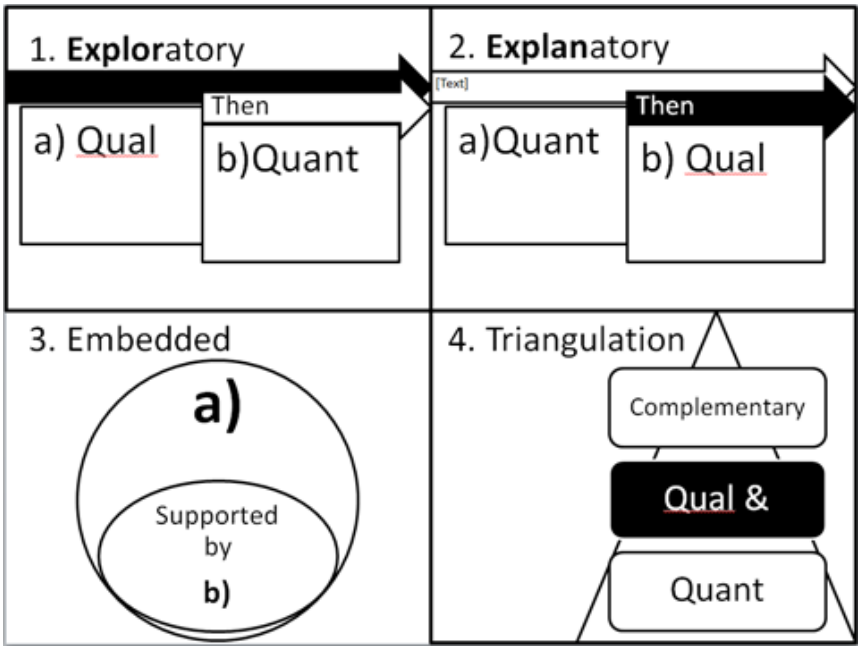


Figure3 : Mixed Methods Designs

1) Exploratory studies begin with a qualitative approach that allows librarians to explore the issue without having to guess what they might find. After an initial analysis of the qualitative findings, the librarians carry out a quantitative stage, which will test the preliminary explanations suggested by the qualitative results. For example, librarians could begin a study with focus groups or interviews about their reference service. Based on the issues that emerge from those discussions, the librarians could develop an incisive survey to study the larger population or they could use statistical methods to analyze reference statistics.

2) Explanatory studies begin with quantitative data that describes the current situation and librarians can run statistical tests to find trends or other relationships in the data. After analyzing these initial findings, librarians can generate qualitative data to help them explain why these relationships may exist. For example, librarians could begin a study by analyzing reference statistics. After finding relationships between types of questions and times of year, librarians could conduct open-ended surveys or brief interviews to investigate possible underlying causes for the trends they identified.

3) Embedded studies emphasize either qualitative or quantitative methods and they treat the secondary method as subordinate to the primary one. For example, a primarily quantitative embedded study could involve an analysis of reference statistics and supplement that analysis with qualitative data generated during a brief email interview with a reference coordinator at another library who has insight into the meaning of the quantitative results.

4) Triangulation studies do not have a set order or proportion for the relationship between quantitative and qualitative data. Instead, they involve analyzing a single phenomenon from multiple angles and cause the data to converge. For example, a study based on surveys can include open-ended questions (qualitative) and fixed response items (quantitative). During the analysis, the librarian can merge the qualitative and quantitative results in order to test possible relationships. By mixing different modes of research using any of these designs, librarians will be more likely to fill gaps in their understanding, making the results of their studies more meaningful within and beyond the library.

Learning Activities

Participants worked in small groups to explore scenarios from area libraries. They generated research questions based on the scenarios and identified data to collect and tools/methods that could be used to analyze that data. They also tried to analyze data sets that were provided. Participants began planning their own action research projects by articulating problems or situations in their own work, identifying data they already had or could easily collect that could lead to a mixed methods research approach, and determining which data analysis techniques to use.

For more information on the data collection and analysis tools discussed, the data sets and case studies presented, and a bibliography of useful resources, visit the preconference's blog at http://alaworkshopdata.wordpress.com/

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