



EBL 101

## Matching Question Types to Study Designs

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In the last EBL 101 column, Lorie Kloda discussed asking the right questions, and outlined the formulation of an answerable question. In evidence based librarianship, the question is the foundation upon which everything else rests. The question needs to be focused enough to find precise evidence while taking into account the key concepts involved in the situation. However, before rushing off to begin searching the literature after constructing the best question ever, take a moment to think about the type of question you've formulated. The question type can point you in the direction of the study design best suited to answering your particular question.

Often, one's prior level of knowledge of the topic will determine the type of question asked. First, decide if the question is a **background question** or a **foreground question**. A background question is one that is more general in nature and one that asks about fundamentals and facts. These types of questions might arise among novice practitioners, or among librarians who are encountering a new issue in the field for the first time. An example of a background question is, "What are the possible solutions to plagiarism in a post-secondary situation?" These types of questions may be answered by consulting a handbook, by conducting a

literature review, or by eliciting thoughts and opinions from colleagues.

By contrast, the foreground question presumes prior knowledge of the subject, and the practitioner usually has a couple of alternatives in mind from which to choose. When a foreground question is generated, one is most likely at the point of decision making. An example of a foreground question is, "Among teen public library patrons, do after school study programs result in higher marks at school?" These types of questions are often answered by turning to the literature and finding relevant research studies (Booth 62).

But what type of research study should one look for? This is where the next grouping of question types comes into play. Jonathan Eldredge has written about question types and levels of evidence. He determined that there are three types of questions generated by library professionals:

- Prediction questions
- Intervention questions
- Exploration questions

**Prediction questions** typically predict an outcome under particular circumstances. An example of such a question would be, "Are students who have attended information literacy sessions more likely to continue their studies?" These types of questions are often answered by using a cohort study; that is, a study that involves a defined population that is closely monitored over time to determine the outcome of being exposed to a particular phenomenon. Andrew Booth reported that prediction questions, and thus cohort studies, have investigated topics such as information resource use, outreach, education, and marketing (63).

**Intervention questions** are aimed at finding particular outcomes by comparing different actions (or interventions). These questions often compare an innovation to a traditional way of

doing things. An intervention question might look like this: "Do medical students learn searching skills more effectively from librarians or teaching faculty?" (Eldredge 11). The classic research design for an intervention question is a randomized controlled trial (RTC). An RTC involves taking two similar groups and exposing them to the different actions; that is, one group is taught searching skills by librarians and one group is taught by teaching faculty. Because the groups are similar in their make-up, any changes can most likely be attributed to the intervention. Intervention questions could involve teaching, delivering a reference service, or maintaining a collection (Booth 64).

**Exploration questions** closely resemble background questions. These questions typically ask or imply a "why" query. One example is, "Why do non-library users not use their library?" Qualitative research methods are best suited for the exploration question as these types of questions are more likely to be open-ended, and to have a need to explore ranges of behaviors and reasons for those behaviors. Study designs include focus groups, ethnographic studies, observation, interviewing, and historical analysis (Booth 65).

Now that you have decided what type of study design is best suited to your question, it is time to examine the research evidence. Next time: Looking to the Literature—Domains to Help Determine Where to Look.

### Works Cited

- Booth, Andrew. "Formulating Answerable Questions." *Evidence Based Practice: An Information Professional's Handbook*. Eds. Andrew Booth and Anne Brice. London: Facet, 2004. 61-70.
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