

Library Research Methods

Guest Instructors: Darcy Duke and Angela Locknar, MIT Libraries

This class will help you gather information related to your projects. The initial 45 minutes will be lecture/demo with screen projection, while during the final 45 minutes, project teams can conduct some research with these library tools and librarian help as needed.

Why do library research for you projects?

- Learn what have people already done; i.e. SQL databases for health care tracking
- Explore technologies that might be relevant: i.e. for micro-hydro, research sedimentation control methods.
- Collect useful data: e.g. for solar water disinfection, you might want to review regional and community safe water statistics.

D-Lab Research Tools

The MIT Libraries have created a special page for D-Lab SP.722 resources. It includes

- Book search
- General Reference (Virtual Reference Collection)
- Journal article search tools (VERA)
- Facts and Statistical Information
- D-Lab Project Specific Resources

Book Search

For example: search the library with keyword "bicycle powered." There's a 1978 MIT thesis on a bicycle powered water pump!

Successful keyword searches often require a creative approach. You may be researching dogs, but need to search with a lot of different words – i.e. dogs, canines, puppies. In the MIT Library search tool, there's a subject link in any record, to expand search into holdings that the librarians felt are related.

General Reference

The MIT Virtual Reference Collection is a resource compiled by the library staff with links to all manner of online resources. It contains style manuals, travel information, encyclopedias, etc.

Journals

MIT's VERA (Virtual Electronic Resource Access) system indexes journals by subject area. Journals may be more up to date, more specific or detailed, than what is published in books. Vera directs you to all the databases that

index a particular subject area; in some cases, there may be 20-30 or more databases in a subject, in which case it's well worth your while to talk to a librarian about your specific needs.

Facts and Statistics

Consult the online versions of four important collections: CIA World Factbook, EIU Country Profiles, WHO, and World Bank.

For instance, use the World Bank WDI Online (World Development Indicators) tool to get statistics on health care expenditures per capita on countries of interest.

Note that the online tools are pretty expensive; there are MANY more resources available only in print. See a librarian to dig more deeply. Additionally, Amy has amassed a huge collection of very specific "small press" documents.

D-Lab Project Specific Resources

MIT Library staff has compiled additional topic-focused resources (books, journals, organization URLs) on the five design challenge projects.

Example, for SoDiS:

- Direct links to two reference databases: Environmental Sciences and Pollution Management Collection, and the SciFinder Scholar tool from the American Chemical Society.
- Wildcard searching: Search on solar water disinfect* to capture some important variations. (Need to verify how a given database uses wildcards).
- SciFinder Scholar is a powerful front end for Chemical Abstracts research; requires a client software package.