Technical Communication
A Practical Approach:
Chapter 15: Technical Research

- William Sanborn Pfeiffer
- Kaye Adkins
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Technical Research
- Getting Started
- Searching Online Catalogs
- Searching In the Library
- Searching the Web
- Talking to Field Experts (Using Questionnaires and Interviews)
- Using Borrowed Information Correctly
- Selecting and Following a Documentation System
- Writing Research Abstracts

Getting Started
- Ask yourself the following questions to give direction to your work…
  - What questions must be answered during the research phase?
  - What print, multimedia, and electronic sources would be most useful?
  - What is the nature and extent of information that is needed? Should it be scholarly or popular? Current or historical?

Searching Online Catalogs
- Author or Title Search
- Subject Search
- Keyword Search
- Advanced Search Techniques
Searching In the Library

- Library Services
  - Reference and Information
  - Interlibrary Loan
  - Circulation

Searching the Web

- Fundamentals of Web Searching
  - Using Your Evaluation Skills
  - Not all answers from search engines are valid (try “meng”)
  - Investigate time and effort in critically evaluating what you find
  - Be alert to the following…
    - obscured authorship
    - out-of-date information
    - subtle and obvious bias
    - poor-quality links
    - flawed style and design

Consult with Human Experts: Using Questionnaires and Interviews

- Questionnaires
  - Preparing the Questionnaire
  - Conducting the Project
  - Reporting the Results

Using Questionnaires and Interviews

- Interviews
  - Preparing for the Interview
  - Conducting the Interview
  - Recording the Results

Using Borrowed Information Correctly

- Avoiding Plagiarism
- Following the Research Process
- Varieties of Documentation
Using Borrowed Information Correctly

- Avoiding Plagiarism
  - Cite sources for ALL borrowed information used in your final document. This includes quotations, paraphrases, and summaries.

Why document sources thoroughly and accurately?
- Courtesy
- Ethics
- The Law

Selecting and Following a Documentation System

- Varieties of Documentation Style
  - American Psychological Association (APA)
  - Council of Biology Editors (CBE)
  - Modern Language Association (MLA)
  - University of Chicago Press

Writing Research Abstracts

- Types of Abstracts
  - Informational Abstract
    - Format
    - major points from original document
    - Purpose
    - main findings, conclusions, and recommendations of original document
    - Length
    - one to three paragraphs

  - Descriptive Abstract
    - Format
    - main topics of document without supporting details such as findings, conclusions, or recommendations
    - Purpose
    - given their lack of detail, helps readers decide whether they want to read the original document
    - Length
    - no more than one paragraph
Writing Research Abstracts

- Guidelines for Writing Research Abstracts
  - Highlight the Main Points
  - Sketch Out an Outline
  - Begin with a Short Purpose Statement
  - Maintain a Fluid Style
  - Avoid Technical Terms Readers May Not Know

Examples of Research Papers and Bibliography Styles

- APA style

- ACM style
  - http://doi.acm.org/10.1145/1508865.1508881

- IEEE style
  - A variation of ACM style