HANDS-ON TRAINING MANUAL

On

Information Literacy Skills for Faculty Members: Enhancing Research Productivity

Developed

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Module 1: Database Navigation & Search Strategies

Learning Objectives:

1. Understand the different types of databases and their contents.

2. Develop effective search strategies using Boolean operators and keywords.

3. Learn advanced search techniques to refine search results.

Section 1.1: Database Overview

- Definition: A database is a collection of organized data, often with search functionality.
- Types of databases:
    - Academic databases (e.g., JSTOR, ScienceDirect)
    - Discipline-specific databases (e.g., PubMed, PsycINFO)
    - Multi-disciplinary databases (e.g., Google Scholar)
    - Library catalogs (e.g., Koha, Millennium, Liberty NewGenlib, etc)

Section 1.2: Boolean Operators

- Definition: Boolean operators are used to combine search terms.
- Common Boolean operators:
    - AND (narrows search)
    - OR (broadens search)
    - NOT (excludes terms)
    - Quotation marks (phrase searching)

Examples:

- (cancer AND treatment)
- (psychology OR psychiatry)
- (education NOT teaching)

Section 1.3: Keyword Searching

- Tips for effective keyword searching:
    - Use relevant keywords
    - Avoid ambiguous terms

- Use synonyms
- Use truncation (e.g., comput*)

Examples:

- ("climate change" AND policy)
- (artificial intelligence OR machine learning)

Section 1.4: Advanced Search Techniques

- Wildcards: * (e.g., comput*)
- Proximity operators: NEAR, ADJ (e.g., "climate change" NEAR policy)
- Field searching: author, title, abstract (e.g., author: Smith, J)
- Image: advanced search interface

Section 1.5: Hands-On Exercise

- Search challenge: Find relevant articles using Boolean operators and keywords.

- Instructions:

1. Choose a database.

2. Conduct a search using Boolean operators.

3. Refine search results using advanced search techniques.

4. Share results with the group.

Section 1.6: Conclusion

- Summary: Key takeaways from Module 1.
- Next Steps: Module 2 Source Evaluation & Critical Thinking.

Additional Resources:

- Database tutorials (e.g., ProQuest, EBSCO)
- Library guides (e.g., research databases, search strategies)
- Online webinars or workshops on database searching

Module 2: Source Evaluation & Critical Thinking

Learning Objectives:

1. Understand the importance of source evaluation.
2. Develop critical thinking skills to assess source credibility.
3. Apply evaluation criteria to various sources.

Section 2.1: Introduction to Source Evaluation

- **Definition:** Source evaluation is the process of assessing the credibility and reliability of sources.
- **Importance:** Avoid misinformation, ensure academic integrity, and support research with quality sources.

Section 2.2: Scholarly vs. Popular Sources

- **Definitions:**
    - **Scholarly sources** (peer-reviewed, academic journals)
    - **Popular sources** (newspapers, magazines, blogs)
- **Characteristics:**
    - **Scholarly:** formal language, citations, peer-reviewed
    - **Popular:** informal language, no citations, entertainment-focused
- **Examples:**
    - *Journal of Psychology* (scholarly)
    - *Time Magazine* (popular)

Section 2.3: Evaluating Source Credibility

- **C.R.A.A.P. Test:**
    - **Currency** (Is the information up-to-date?)
    - **Relevance** (Is the information relevant to your research?)
    - **Authority** (Is the author credible?)
    - **Accuracy** (Is the information accurate?)
    - **Purpose** (What is the author's purpose?)

The CRAAP Test Checklist

C.R.A.A.P. Test Criteria

CURRENCY: timeliness of the information

- Is there a **date** showing when the information was published or last updated?
- Is the information **up-to-date enough** for your topic or is it too old? (the importance of the currency of the information will vary depending on your topic).

RELEVANCY: usefulness of the information

- Is the information **relevant** to your topic?
- Does the information **help answer** your particular questions OR provide you with **new ideas** to explore?
- Is the information at an **appropriate** level for your **age**?

AUTHORITY: credibility of the source of information

- Investigate the source!
- Who is the **author/source** of the information? Is there **contact information** for the author?
- Open a new tab and **google the name of the source**. What are others saying about the source? Is the source trustworthy? Are they experts on the topic providing reliable information?
- Or could they be deliberately providing misleading information, or unintentionally providing inaccurate information?

ACCURACY: truthfulness of the information

- Verify the information!
- Check other sources to see what information they are providing on the topic
- If the information has been repeated from another source, can you **find the original source**? Check that the information has not been taken out of context.
- Ask yourself: does this information sound right? Could it be a joke?

PURPOSE: the reason the information exists

- What is the purpose of the information? Is it to inform or teach? Make money? Entertain?
- Is the information fact or opinion?
- Are there political, cultural, or other types of biases present?
- Does the website URL provide clues as to the purpose of the website?

Section 2.4: Author Evaluation

- **Factors to consider:**
  - Expertise
  - Affiliation
  - Credentials
  - Bias
- **Examples:**
  - Author's bio
  - Institutional affiliation

Section 2.5: Information Bias & Objectivity

- **Definitions:**
  - **Bias:** Distorted or one-sided information
  - **Objectivity:** Balanced, neutral information
- **Examples:**
  - News articles with biased language
  - Academic journals with an objective tone

Section 2.6: Hands-On Exercise

- **Source Evaluation Challenge:** Evaluate a source using the C.R.A.A.P. test.
- **Instructions:**
  1. Choose a source.
  2. Apply the C.R.A.A.P. test.
  3. Identify author credentials and potential bias.
  4. Share results with the group.

Section 2.7: Conclusion

- **Summary:** Key takeaways from Module 2.
- **Next Steps:** Module 3 Resource Discovery & Access.

Module 3: Resource Discovery & Access

Learning Objectives:

1. Understand the different types of library resources.
2. Develop effective search strategies for resource discovery.
3. Learn how to access resources remotely.

Section 3.1: Introduction to Library Resources

- **Overview of library resources:**
  - Books
  - Journals
  - Databases
  - E-books
  - Digital collections

Section 3.2: Library Catalogs & Discovery Layers

- **Definition:** Library catalogs and discovery layers are search interfaces for library resources.
- **Examples:**
  - Primo
  - Summon
  - WorldCat
- **Features:**
  - Search functionality
  - Filtering options
  - Facets

Section 3.3: Database Search Tips

- **Effective search strategies:**
  - Use specific keywords
  - Utilize advanced search features
  - Apply filters
- **Examples:**
  - Searching for peer-reviewed articles
  - Using Boolean operators

Section 3.4: Interlibrary Loan & Document Delivery

- **Definition:** Interlibrary loan (ILL) and document delivery services provide access to materials outside the library's collection.

- **Benefits:**
    - Access to materials not owned by the library
    - Convenient delivery options

Section 3.5: Accessing E-Resources

- **Types of e-resources:**
    - E-books
    - E-journals
    - Databases
- **Access options:**
    - Library's website
    - Database aggregators
    - Mobile apps

Section 3.6: Remote Access

- **Methods for remote access:**
    - Proxy servers
    - VPN
    - Library's website

Section 3.7: Hands-On Exercise

- **Resource discovery challenge:** Find and access a relevant resource.
- **Instructions:**
    1. Choose a database or library catalog.
    2. Conduct a search.
    3. Access the resource.
    4. Share results with the group.

Section 3.8: Conclusion

- **Summary:** Key takeaways from Module 3.
- **Next Steps:** Module 4 Citation Management & Academic Integrity.
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Note:

- Emphasize the importance of effective resource discovery.
- Highlight library services and resources.
- Leave time for Q&A and discussion.

Module 4: Citation Management & Academic Integrity

Learning Objectives:

1. Understand the importance of citation management.

2. Learn citation styles (APA, MLA, Chicago).

3. Use citation management tools (Zotero, Mendeley, EndNote).

4. Recognize plagiarism and maintain academic integrity.

Section 4.1: Introduction to Citation Management

- Definition: Citation management involves organizing and formatting citations.
- Importance: Avoid plagiarism, give credit to authors, and facilitate research.

Section 4.2: Citation Styles

- Overview of major citation styles:

  - APA (American Psychological Association)
  - MLA (Modern Language Association)
  - Chicago (The Chicago Manual of Style)

Examples:

- APA: (Author, Year)
- MLA: (Author's Last Name Page Number)
- Chicago: (Author's Last Name Year)

Section 4.3: Citation Management Tools

- Overview of popular citation management tools:

  - Zotero
  - Mendeley
  - EndNote

Features:

- Citation organization
- Bibliography generation
- Collaboration tools

Section 4.4: Plagiarism & Academic Integrity

- Definition: Plagiarism involves passing off someone else's work as one's own.
- Consequences: Academic penalties, loss of credibility.
- Strategies to avoid plagiarism:
    - Paraphrase
    - Quote
    - Cite

Section 4.5: Hands-On Exercise

- Citation management challenge: Create citations and bibliographies using a citation management tool.
- Instructions:

    1. Choose a citation management tool.
    2. Create a new library.
    3. Add sources.
    4. Generate citations and bibliographies.
    5. Share results with the group.

Section 4.6: Conclusion

- Summary: Key takeaways from Module 4.
- Next Steps: Module 5 Research Metrics & Impact.

Module 5: Research Metrics & Impact

Learning Objectives:

1. Understand research metrics and their significance.

2. Learn to calculate and interpret research metrics.

3. Recognize the importance of research impact.

Section 5.1: Introduction to Research Metrics

- Definition: Research metrics quantify research output and impact.
- Types:
  - Citation metrics (e.g., h-index, citation count)
  - Publication metrics (e.g., journal impact factor)
  - Altmetrics (e.g., social media, downloads)

Section 5.2: Citation Metrics

- h-index: Measures researcher productivity and citation impact.
- Citation count: Measures total citations received.

Examples:

- Calculating h-index using Google Scholar
- Analyzing citation patterns

Section 5.3: Publication Metrics

- Journal Impact Factor (JIF): Measures journal prestige.
- Eigenfactor: Measures journal influence.

Examples:

- Journal rankings using JIF
- Eigenfactor scores

Section 5.4: Altmetrics

- Social media metrics (e.g., Twitter, Facebook)
- Download and view metrics (e.g., PDF downloads)

Examples:

- Tracking altmetrics using tools (e.g., (link unavailable))
- Interpreting altmetric scores

Section 5.5: Research Impact

- Definition: Research impact measures the influence of research on society.
- Types:
    - Academic impact (e.g., citations, publications)
    - Societal impact (e.g., policy, practice)

Examples:

- Case studies of research impact
- Measuring research impact using tools (e.g., ResearchGate)

Section 5.6: Hands-On Exercise

- Research metrics challenge: Calculate and interpret research metrics.
- Instructions:

1. Choose a researcher or journal.
2. Calculate h-index and citation count.
3. Analyze publication metrics.
4. Explore altmetrics.
5. Discuss research impact.

Section 5.7: Conclusion

- Summary: Key takeaways from Module 5.
- Next Steps: Module 6 Collaborative Research & Library Support.

Additional Resources:

- Research metrics guides (e.g., library tutorials)
- Altmetric tools (e.g., (link unavailable))
- Research impact case studies

Note:

- Emphasize the importance of research metrics and impact.
- Highlight tools and resources for calculating and interpreting metrics.
- Leave time for Q&A and discussion.

Module 6: Collaborative Research & Library Support

Learning Objectives:

1. Understand the importance of collaborative research.

2. Learn strategies for effective collaboration.

3. Recognize library support services for research.

Section 6.1: Introduction to Collaborative Research

- Definition: Collaborative research involves working with others to achieve research goals.
- Benefits:
    - Enhanced creativity
    - Shared expertise
    - Increased productivity

Section 6.2: Strategies for Effective Collaboration

- **Communication:**
    - Clear goals
    - Regular meetings
    - Defined roles
- Tools:
    - Project management software (e.g., Asana, Trello)
    - Collaboration platforms (e.g., Slack, Microsoft Teams)
    - Video conferencing tools (e.g., Zoom, Google Meet)

Examples:

- Successful collaborative research projects
- Overcoming collaboration challenges

Section 6.3: Library Support for Research

- Research consultation services

- Literature search support
- Citation management guidance
- Image: library research support services

Section 6.4: Library Resources for Collaboration

- Collaborative workspaces (e.g., group study rooms)
- Research data management services
- Digital scholarship services (e.g., data visualization)

Examples:

- Library-hosted collaborative research events
- Research data management plans

Section 6.5: Hands-On Exercise

- Collaborative research challenge: Develop a research project plan.
- Instructions:

1. Form teams.
2. Define research goals.
3. Assign roles.
4. Create a project plan.
5. Present plan to class.

Section 6.6: Conclusion

- Summary: Key takeaways from Module 6.
- Final thoughts: Research skills for success.

Additional Resources:

- Collaborative research guides (e.g., library tutorials)
- Project management tool tutorials (e.g., Asana, Trello)
- Library research support services information