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Purpose of this Guide

Information literacy is the ability to find, evaluate, and use information effectively. It is also a general education student learning outcome at Auburn. The information literacy skills emphasized in core courses (such as ENGL1120) provide the foundation for higher-level skills introduced in students’ disciplinary courses.

This guide provides information literacy lesson plans and activities to incorporate into your ENGL1120 courses. These can be adapted to meet your students’ learning needs.

Organization of this Guide

The activities are organized according to concepts described in the Association of College & Research Libraries’ Framework for Information Literacy for Higher Education (https://aub.ie/infolitframework). Academic libraries, including Auburn, use the Framework as a manual for information literacy instruction. The activities provided in this guide will not address all the skills associated with the Framework’s concepts. Only skills most relevant to ENGL1120 assignments have been included.

Additional Resources

More learning resources for students, including videos and tutorials, may be found at http://libguides.auburn.edu/comp. These may be used in a variety of ways, including in “flipped” classroom scenarios or as supplements to in-class activities. Check back often, as more online content will be added.

At the web address above, you will also find contact information for members of the Libraries’ instruction team. Team members can provide more details about the contents of this guide, act as a course librarian via Canvas, and help you brainstorm new learning activities.
Section 1: Searching as Strategic Exploration

[Information on this page is excerpted from the Framework for Information Literacy for Higher Education]

Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops.

The act of searching often begins with a question that directs the act of finding needed information. Encompassing inquiry, discovery, and serendipity, searching identifies both possible relevant sources as well as the means to access those sources. Experts realize that information searching is a contextualized, complex experience that affects, and is affected by, the cognitive, affective, and social dimensions of the searcher. Novice learners may search a limited set of resources, while experts may search more broadly and deeply to determine the most appropriate information within the project scope. Likewise, novice learners tend to use few search strategies, while experts select from various search strategies, depending on the sources, scope, and context of the information need.

Knowledge Practices
Learners who are developing their information literate abilities

- determine the initial scope of the task required to meet their information needs;
- identify interested parties, such as scholars, organizations, governments, and industries, who might produce information about a topic and then determine how to access that information;
- utilize divergent (e.g., brainstorming) and convergent (e.g., selecting the best source) thinking when searching;
- match information needs and search strategies to appropriate search tools;
- design and refine needs and search strategies as necessary, based on search results;
- understand how information systems (i.e., collections of recorded information) are organized in order to access relevant information;
- use different types of searching language (e.g., controlled vocabulary, keywords, natural language) appropriately;
- manage searching processes and results effectively.

Dispositions
Learners who are developing their information literate abilities

- exhibit mental flexibility and creativity
- understand that first attempts at searching do not always produce adequate results
- realize that information sources vary greatly in content and format and have varying relevance and value, depending on the needs and nature of the search
- seek guidance from experts, such as librarians, researchers, and professionals
- recognize the value of browsing and other serendipitous methods of information gathering
- persist in the face of search challenges, and know when they have enough information to complete the information task

Auburn University Libraries
Selecting Subject Databases

Learning Outcome:
Students will evaluate subject databases in order to choose the most appropriate ones to search for their information need.

Key Takeaways:
Purpose and contents of subject databases
How to find subject databases on the Libraries’ website
Scope of subject databases
Interdisciplinary nature of research

Activity:
- Ask students to answer a series of questions individually. For example:
  - Write a short paragraph explaining your topic
  - What are your main keywords?
  - Which three fields (disciplines) are most likely to study and report on your topic?
  - Go to the Libraries homepage (lib.auburn.edu), locate the list of subject databases and list at least two subject databases that might cover your topic. Search each, and provide the citation information for the first result from each database.
  - Do these articles seem relevant for your topic? Why or why not?
- Lead discussion of their responses; through discussion, have students develop list of evaluation criteria for subject databases
- Possible assessments:
  - Responses to questions
  - Responses during discussion

Keywording

Learning Outcome:
Students will identify appropriate keywords and synonyms to use to search a library database.

Key Takeaways:
Library database searching requires a different approach than Internet searching
Library database searching most often requires experimenting with various combinations of keywords

Activity:
- Students should have a topic sentence or research question.
• Explain to students that, when searching a library database, they cannot enter sentences or questions into the search box. Instead, they must identify “keywords” related to the research topic.
• Display your own sample topic, and ask students to name the important keywords or phrases.
• Explain that they should generate a list of synonyms and related terms in case the initial search terms do not yield relevant results.
• Ask the students to do the same with their topic

Sample worksheet:

![Diagram of a topic proposal and keyword generation model]

• Ask students to enter keywords into a database such as Academic Search Premier, and revise search as necessary using synonyms and related terms.

Possible assessments:
• Worksheets
• Written reflection of search process
Section 2: Information Creation as a Process

[Information on this page is excerpted from the Framework for Information Literacy for Higher Education]

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences.

The information creation process could result in a range of information formats and modes of delivery, so experts look beyond format when selecting resources to use. The unique capabilities and constraints of each creation process as well as the specific information need determine how the product is used. Experts recognize that information creations are valued differently in different contexts, such as academia or the workplace. Elements that affect or reflect on the creation, such as a pre- or post-publication editing or reviewing process, may be indicators of quality. The dynamic nature of information creation and dissemination requires ongoing attention to understand evolving creation processes. Recognizing the nature of information creation, experts look to the underlying processes of creation as well as the final product to critically evaluate the usefulness of the information. Novice learners begin to recognize the significance of the creation process, leading them to increasingly sophisticated choices when matching information products with their information needs.

Knowledge Practices
Learners who are developing their information literate abilities

- articulate the capabilities and constraints of information developed through various creation processes;
- assess the fit between an information product’s creation process and a particular information need;
- articulate the traditional and emerging processes of information creation and dissemination in a particular discipline;
- recognize that information may be perceived differently based on the format in which it is packaged;
- recognize the implications of information formats that contain static or dynamic information;
- monitor the value that is placed upon different types of information products in varying contexts;
- transfer knowledge of capabilities and constraints to new types of information products;
- develop, in their own creation processes, an understanding that their choices impact the purposes for which the information product will be used and the message it conveys.

Dispositions
Learners who are developing their information literate abilities
• are inclined to seek out characteristics of information products that indicate the underlying creation process;
• value the process of matching an information need with an appropriate product;
• accept that the creation of information may begin initially through communicating in a range of formats or modes;
• accept the ambiguity surrounding the potential value of information creation expressed in emerging formats or modes;
• resist the tendency to equate format with the underlying creation process;
• understand that different methods of information dissemination with different purposes are available for their use.

Publication Process
Learning Outcome:
Students will evaluate the publication process for various sources in order to recognize how that process influences the capabilities and constraints of a source.

Key takeaways:
The context in which information will be used must be taken into account when evaluating sources
Scholarly sources are not necessarily “better;” their usefulness depends on the information need

Activity:
• Divide students into groups and assign each group a different type of source (for example, give two groups the same scholarly article, give two other groups the same newspaper article); [Tip: Use the types of sources required or allowed for the course assignments.]
• Ask groups to answer questions about their assigned source [Tip: Students may need to search online to find this information.] For example:
  o Who might write or create this type of source?
  o What’s the process through which this type of source is written and edited?
  o What’s the time frame for publishing this type of source? Does this matter? Why or why not?
    o Could these two sources be used in the same paper effectively? Explain.
• Lead discussion of their responses

Possible assessments:
  o Group responses to questions
  o Written reflection
Section 3: Authority Is Constructed and Contextual

Information resources reflect their creators’ expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required.

Experts understand that authority is a type of influence recognized or exerted within a community. Experts view authority with an attitude of informed skepticism and an openness to new perspectives, additional voices, and changes in schools of thought. Experts understand the need to determine the validity of the information created by different authorities and to acknowledge biases that privilege some sources of authority over others, especially in terms of others’ worldviews, gender, sexual orientation, and cultural orientations. An understanding of this concept enables novice learners to critically examine all evidence—be it a short blog post or a peer-reviewed conference proceeding—and to ask relevant questions about origins, context, and suitability for the current information need. Thus, novice learners come to respect the expertise that authority represents while remaining skeptical of the systems that have elevated that authority and the information created by it. Experts know how to seek authoritative voices but also recognize that unlikely voices can be authoritative, depending on need. Novice learners may need to rely on basic indicators of authority, such as type of publication or author credentials, where experts recognize schools of thought or discipline-specific paradigms.

Knowledge Practices
Learners who are developing their information literate abilities

- define different types of authority, such as subject expertise (e.g., scholarship), societal position (e.g., public office or title), or special experience (e.g., participating in a historic event);
- use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility;
- understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered “standard,” and yet, even in those situations, some scholars would challenge the authority of those sources;
- recognize that authoritative content may be packaged formally or informally and may include sources of all media types;
- acknowledge they are developing their own authoritative voices in a particular area and recognize the responsibilities this entails, including seeking accuracy and reliability, respecting intellectual property, and participating in communities of practice;
- understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time.
Dispositions
Learners who are developing their information literate abilities

- develop and maintain an open mind when encountering varied and sometimes conflicting perspectives;
- motivate themselves to find authoritative sources, recognizing that authority may be conferred or manifested in unexpected ways;
- develop awareness of the importance of assessing content with a skeptical stance and with a self-awareness of their own biases and worldview;
- question traditional notions of granting authority and recognize the value of diverse ideas and worldviews;
- are conscious that maintaining these attitudes and actions requires frequent self-evaluation.

Exploring Authority
This activity was developed by Cristy Moran of Broward College
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Learning Outcome:
- Students will evaluate the level of expertise needed in order to consider a source as credible for a particular information need

Activity:
- Present students with a scenario;[Tip: Develop a scenario based on the class theme or a recent class discussion.]
Example scenario:
“Your fifty year-old mother has been prescribed a heavy duty painkiller for a back injury she suffered a few weeks ago. You’ve heard a lot of stories on the news about the abuse of prescription medicine. Your goal is to find out if she should continue to use this medication and, if so, how long before you should start being concerned that she may be addicted to it.
Your mother is headstrong and very smart. She loves you very much, but considers you her child still and won’t just take your advice. She will need convincing before she believes you are an authority on a certain topic.
You have done a bit of research and found some articles that are helpful. The problem is that you don’t know if you should trust the people the articles are quoting simply because they sound smart.
The following is a list of quotes and their speakers taken from recent news items about addiction to pain medication. [Tip: Determine beforehand if students will have access to the sources you select]
1. “It has become increasingly clear that opioids carry substantial risk but only uncertain benefits — especially compared with other treatments for chronic pain.” Dr. Thomas R. Frieden quoted in New York Times, March 15, 2015.
2. "Physical dependence (also called tolerance) is the body’s response to long-term use. People who are physically dependent on a drug may need higher doses to
get the same effects and may experience withdrawal symptoms when cutting back or abruptly stopping the drug." Mayo Clinic Staff posted on September 19, 2015.

3. "Physiological dependence is the normal response to regular dosages of many medications, whether opioids or others. It also happens with beta blockers for high blood pressure." Dr. Wilson Compton quoted in *Five Thirty Eight*, July 19, 2016.

You will need to research the sources. It isn't enough that they sound smart and what they say makes sense to you. You will need to learn whether or not the sources and who they quote are credible. This means you will have to research them.

You will provide a short biography, history, or resume for the persons cited above that answers the question: *Is this a credible source to speak on this topic?*

Things you should consider:

- **What professional and/or academic history do they have relevant to this topic?**
- **If there is controversy surrounding this topic, does the source have a strong investment in either one side of the debate?** *(For example, do they make a financial gain from their side?)*
- **What did you learn about the sources they cited?**

You need to convince your mother that you know what you're talking about, in part, by convincing her that your opinions come from experts on the abuse of painkillers. Your decision for each speaker should be explained in a 100-150 word paragraph - a total of 300-450 words."

**Evaluating Sources**

This lesson explores the ways in which evaluative criteria are context specific. When evaluating sources, one must consider the context in which the information will be used.

**Learning Outcome:**

Students will generate their own evaluative criteria and apply it to different types of sources (i.e., scholarly articles, newspaper articles)

**Activity:**

- Divide students into groups and ask them to discuss and record how they evaluate a source (i.e., the criteria they use to determine whether a source is credible)
- Lead discussion of their responses
  - Typical criteria: author’s expertise, publisher or host, publication process, currency of the information and when that matters, types of sources cited, bias [*Tip: Rather than viewing bias as necessarily “bad”, students should understand that “point of view” pieces may also be useful.*]
- Assign each group a research scenario and two different type of sources related to the scenario (for example, give all groups the same newspaper article and scholarly article) [*Tip: Use the types of sources required or allowed for the course assignments.*]
Example scenario: For speech class, you must present an argument in favor of net neutrality. You’ve been asked to use reliable sources. You’ve found two already (the two handed out today).

- Ask groups to answer questions using the evaluative criteria they developed. [Tip: These sample questions are meant to spark discussion and do not necessarily have a right/wrong answer]:
  - When evaluating these two sources for use in this speech, are some criteria more important than others? Is this different for each source? Explain.
  - Do you need to add criteria? If so, what?
  - Could both these sources be used effectively for this research scenario? Explain.

- Lead discussion of their responses, paying special attention to how context and need can influence a source’s credibility.

Possible assessments:
- Criteria developed
- Responses to questions
- Written reflection
Section 4: Research as Inquiry

[Information on this page is excerpted from the Framework for Information Literacy for Higher Education]

Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field.

Experts see inquiry as a process that focuses on problems or questions in a discipline or between disciplines that are open or unresolved. Experts recognize the collaborative effort within a discipline to extend the knowledge in that field. Many times, this process includes points of disagreement where debate and dialogue work to deepen the conversations around knowledge. This process of inquiry extends beyond the academic world to the community at large, and the process of inquiry may focus upon personal, professional, or societal needs. The spectrum of inquiry ranges from asking simple questions that depend upon basic recapitulation of knowledge to increasingly sophisticated abilities to refine research questions, use more advanced research methods, and explore more diverse disciplinary perspectives. Novice learners acquire strategic perspectives on inquiry and a greater repertoire of investigative methods.

Knowledge Practices
Learners who are developing their information literate abilities
- formulate questions for research based on information gaps or on reexamination of existing, possibly conflicting, information;
- determine an appropriate scope of investigation;
- deal with complex research by breaking complex questions into simple ones, limiting the scope of investigations;
- use various research methods, based on need, circumstance, and type of inquiry;
- monitor gathered information and assess for gaps or weaknesses;
- organize information in meaningful ways;
- synthesize ideas gathered from multiple sources;
- draw reasonable conclusions based on the analysis and interpretation of information.

Dispositions
Learners who are developing their information literate abilities
- consider research as open-ended exploration and engagement with information;
- appreciate that a question may appear to be simple but still disruptive and important to research;
- value intellectual curiosity in developing questions and learning new investigative methods;
- maintain an open mind and a critical stance;
value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process;
• seek multiple perspectives during information gathering and assessment;
• seek appropriate help when needed;
• follow ethical and legal guidelines in gathering and using information;
• demonstrate intellectual humility (i.e., recognize their own intellectual or experiential limitations).

**Developing a Research Question**

Choosing topics and developing research questions are a vital part of the research process. However, because it *is* a process, students’ research questions will most likely evolve throughout the semester. Rather than a single activity, below are ideas and suggestions on how to help students with this process throughout the semester.

• Students brainstorm topic ideas using mind maps
• Students justify why their topic is important (i.e., why would someone care?)
• Students address the 3Ws about their topic – Who, What, Why
• Integrate group work or peer‐review into the process
• Encourage students to focus on the scope of their investigation
• If you require students to settle on a topic for their final research paper early in the semester, allow room for revision as they learn more about their topic.

**Other Activities Related to Research as Inquiry:**

[These activities were excerpted from a draft version of the Framework for Information Literacy for Higher Education]

• Students in a first year course reflect upon the steps they went through when researching a major purchase or event in their lives (buying a car, selecting a college, etc.). They identify the steps involved in the research behind such a decision, and confront the importance of employing a similar strategy in the academic setting.
• A researcher/guest speaker attends the class and describes a research project from conception to conclusion. Students attempt to diagram the steps reflected in the description, and then work with the speaker to develop a robust conception of the process (recognizing that the process varies from project to project and researcher to researcher).
  o Students then journal about how their research process relates to that of the researcher, and what changes they might make in order to attempt more authentic, knowledge-generating research experiences.
• Assign students to keep research logs in which they note changes in particular research directions as they identify resources, read, and incorporate new learning.