102 SciInfoLit: Research Portfolio

Due Date

This assignment is due the last day of class, Friday, December 7th, at class time (2:40 pm EST).

Description

One of the main purposes of this course is to teach you how to effectively use the scientific literature to satisfy an information need. This assignment is designed to assess how well you can do that by asking you to keep track of all the steps you take in the process of completing a research assignment. You'll demonstrate all the skills you learn in the course by completing the various items required for the portfolio in addition to the research assignment itself.

Some of the items that must be included in the portfolio will also be separate assignments due at various points in the semester. At the end of the semester, you'll combine these items with other items not assigned during the semester, along with a copy of the product of your research assignment. This will constitute your portfolio.

The Research Assignment

The portfolio is not your research assignment, but rather is a record of the process of accomplishing a research assignment. So you will need a research assignment to go along with the portfolio.

You have two choices in this regard. We will call these choices Option A and Option B for the sake of reference throughout this document.

Option A

If you have a research assignment you need to complete for another course, you may feel free to use that assignment as the basis of your portfolio. A research assignment from another course must satisfy the following requirements:

- It must be on a topic of a scientific, technical, engineering or medical nature
- It must require you to use the scholarly scientific literature in order to complete it
- It must require a bibliography of sources used

Option B

If you don't have a research assignment in another course that satisfies these requirements, you'll need to do one for this course. You can find the details of what is required for Option B in the detailed description for "Final Product" below.

Summary of Portfolio Items

1. Reflection: Selecting your topic
2. Research question and keywords
3. Research timeline
4. Identifying sources and developing search strategies
5. Reflection: Searching and accessing material
6. Draft of bibliography
7. Consultation with professor
8. Reflection: Midpoint / revisions
9. Bibliography organization
10. Reflection: Overall research process

Additionally, you must submit a copy of the final product of your research assignment.

Portfolio-Wide Criteria

- Your portfolio must be submitted in electronic format, but you have two options within that requirement. There is no grading preference between the two options.
    - Submitting files. Portable Document Format (PDF) is preferred but MS Word format will also be accepted. All portfolio items must be in a single file. The final product can be in a separate file (and may need to be depending on what the final product is).
    - Blog format. If you like, you may write your portfolio items in a website blog format. You may use any publicly available blogging service (Blogger, WordPress, Tumblr). Make each portfolio item a separate blog post and submit the URL for the blog as a whole. Make sure that the site is publicly available. The final product must also be on the web and publicly available, either by uploading to the blog or via some other method. Feel free to consult with me if you're interested in pursuing this option.
- All portfolio items with a length criteria (e.g., at least one page long) must be in 12-point font, double-spaced, with no greater than 1" margins.
- The items in the portfolio should be ordered according to the summary list above.
- The four reflections are designed to give you an opportunity to think about, reflect on and self-examine the research process. At minimum you are expected to answer the questions posed in the details below, but feel free to write as much as you like on the topic.
- For the non-reflection items in the portfolio, keep them short and to the point. No additional narrative is needed beyond what is asked for.
- Please note the due date for the portfolio. For Option A, it may be earlier than the due date for the research assignment you are pairing it with. If that is the case, to be clear, you will need to complete your research assignment in total and submit it with the portfolio. (But it will be nice to have it done and out of the way early, right?) For Option B, your research assignment will be due concurrently with the portfolio.

Detail on Portfolio Items

Reflection: Selecting your Topic

In at least one page, reflect on how you selected your topic. What made you choose the topic that you did? Just saying that the topic was interesting is not enough. Instead, explain what interested you about the topic and what personal experiences may have influenced your decision. Did you consider several different topics before settling on this one? If so, why did you rule the others out? How does this topic meet the criteria for the research project? In addition to answering these questions, include at least two sentences summarizing what you already know about the topic (either through your own experience or through what you have heard or read through the media).

Research Question and Keywords

Identify the research question guiding your project. Include your thesis statement, if you think it is appropriate to have one. Break your question down into its major concepts or subjects and brainstorm a list of at least three (3) keywords for each major concept.

Research Timeline

Given what you know about the amount of time needed to accomplish each part of the research process, define a realistic overall plan and timeline to complete your research assignment. For each task or part of the process to complete, give an estimated amount of time you think it will take to complete it, and a specific date for its completion.

Identifying sources and developing search strategies

Before you start searching for information, identify the sources you will use. For each specific information need you encounter throughout your research process, pinpoint specific databases and resources you plan to search in and what kind of information you hope to find there.

Then list the search strategies you plan to use. Will you search using keywords? Controlled vocabulary? How will you combine your search terms using Boolean operators? Will you use citation searching? Do you have backup strategies in case your first strategy doesn't work? Will you use limiters or faceting? Which ones?

Reflection: Searching and accessing

In at least one page, reflect on the process of searching and accessing the information and material you need for your project. How successful were your initial strategies for searching and how do you know whether or not they were successful? How did you revise your search strategies during your searching? Were there any strategies that completely failed? If so, why do you think that occurred? Also, reflect on your successes and failures in accessing the information once you found it. Were you able to get your hands on everything you wanted? If not, why not? Did you decide to place Interlibrary Loan requests for any items, and what went into that decision? What information do you still need to find to complete your assignment?

Draft of bibliography

Once you've identified some sources for your project, prepare a bibliography of those sources. The criteria for this bibliography should match the criteria for the assignment itself. For Option A, have this

draft meet any requirements of the bibliography for that assignment. For Option B, see the description in "Final Product" below.

Consultation with professor

Meet with the professor for whom you are completing the research assignment to check your progress. (If you doing Option A, meet with the professor for that course. For Option B, meet with me.) In this meeting, bring along the draft of your bibliography. Get your professor's feedback on your research question, your research so far and the sources you've found. This meeting must take place at least one week (seven days) before the research assignment is due.

In your portfolio, write a brief summary of your meeting. Mention the date and time it occurred and detail the feedback you received and what, if anything, you need to do differently after receiving it. For Option A, please also e-mail me immediately after the meeting to tell me you did so, so I can verify with them that the meeting occurred.

Reflection: Midpoint / revisions

Following your consultation with your professor but before the assignment is due, in at least one page, reflect on the research process so far, with a focus on three aspects: reading and evaluating information, revisions and organization.

How have you been extracting the needed information from the material you've found? Have you been reading thoroughly or skimming? How have you been evaluating the information you have found? Are there any that "tripped your alarms" (made you skeptical about their credibility)?

Have you needed to revise your topic and/or research question? If so, why and what did you change? Have you needed to start over with new keywords, sources and search strategies at any point?

How are you planning to organize the final product of your research assignment? Detail any outlines, drafts, etc. you will prepare for this purpose.

Bibliography organization

Detail what system you are planning to use to manage your cited sources and your bibliography. Even if your system is as basic as "e-mailing URLs to myself," describe it.

Reflection: Overall research process

After completion of the research assignment, in at least one page, reflect on your own experiences with the process as a whole, and on the process of building your portfolio. Use these questions as guidelines for your reflection:

- What did you like or not like about the items you were expected to submit? Why?
- What difficulties (if any) did you encounter in your research?
- What could have helped you do better research?
- What did you learn from doing the research paper and associated assignments? How did your research change your existing ideas, knowledge and opinions on the topic?

- What advice would you offer to students who are assigned a similar project?
- How could this project be improved?
- What skills did you learn that you think will help you in other courses?

Final product

Submit a copy of the final product for your assignment along with your portfolio. For Option A, the final product must meet all criteria and requirements for that assignment.

For Option B, the requirements for the final product are as follows:

Requirements for a 102 SciInfoLit research project

- Choose a topic of interest to you related to science information literacy. Ask a research question about the topic. Attempt to answer the question by gathering information relevant to the topic, reading it and analyzing it in light of the question.
- Some possible broad areas to consider include changes in science information, networked science, big data, the open access movement, the scholarly journals crisis, electronic books in science, science literacy in the Information Age, bioinformatics or chemoinformatics, copyright in the digital age, and scientometrics.
- Present your findings in some way. You can use any format you like. Some possible formats include but are not limited to: a research paper (5-7 pages in length not including figures), a poster with accompanying group question and answer session, or an oral or multimedia presentation (10-15 minutes in length).
- You must cite at least five (5) scholarly, peer-reviewed resources. You are encouraged to use any other resource appropriate for your information needs throughout the research process.
- You must follow the Council of Science Editors (CSE) format for citations, bibliography and other formatting details. The Science Library has a book (*Scientific Style and Format: The CSE Manual for Authors, Editors and Publishers*) that details this format. Also there are numerous webpage guides that are a mere Google search away.
- For any other details that are unclear or questions you have, please ask me.

Submit the final product separately from your portfolio. The submission will be determined by the format of your product. Papers can be submitted as electronic documents. For presentations or posters, we will make time during the last class session to give or play your presentation in class, or present and answer questions about your poster.

Grading

As stated in the class syllabus, the research portfolio will be worth 40% of your grade for the course. The portfolio itself is divided into 150 points, distributed as follows:

Portfolio Items	Points
1. Reflection: Selecting your topic	10

2. Research question and keywords	10
3. Research timeline	5
4. Identifying sources and developing search strategies	10
5. Reflection: Searching and accessing material	15
6. Draft of bibliography	15
7. Consultation with professor	10
8. Reflection: Midpoint / revisions	15
9. Bibliography organization	5
10. Reflection: Overall research process	20
Formatting, typos, citation style, etc.	15
Grade on Final Product	20
TOTAL	150

For Option A, I will not be grading your final product. I will be contacting the professor for the course for which you completed the assignment, taking the grade they gave your product, and converting that to a score out of 20 points. For Option B, I will be grading your product, of course.

Please note my grading policies in the syllabus. Late work is NOT accepted and there will be no extensions given, except in the case of a medical or personal emergency supported by a note from your class dean.