Chemistry/Information Literacy/Writing Assignment: Chromatography

“How chromatography is used in my field of study”

Due Date:

Purpose

Skills: The purpose of this assignment is to help you practice the following skills to become information literate learners. Information literate learners should be able to:
(1) identify the need for information, (2) find the information with a focused search strategy, (3) evaluate the information and revise the search strategy, (4) use and share the information appropriately

Knowledge: The purpose of this assignment is to help you to (1) locate and investigate resources available in your field of study, (2) examine connection between your field of study and chemistry

Attitude: The purpose of this assignment is to help you to (1) reflect and assess your learning experience, (2) transform into an organized learner to improve the quality of own work

Task

Background: The word ‘chromatography’ comes from the Greek words for “color” (chroma) and “to write” (graphein). Chromatography is a method of separating, purifying, and identifying very small amounts of mixture.

Major task: Find out how chromatography is used in your field, and/or focus on narrowing your search onto one aspect of chromatography. Pay attention on navigating with effective search strategy, aligning scopes of search outcome with your comprehensive level, and reflecting on your learning experience.

Format: Prepare report with 4-5 pages with 1.5 or single spaced using 11 to 12 font size, with following guideline for each section in ‘Criteria for Success.’ Use a heading for each section, and follow the APA citation guide.

Criteria for Success

Section and essential questions to answer

Section I: Explain your search path.
- What search engine or database did you use? Explain the steps you followed to select and use this resource.
- What keyword(s) did you type in? How did you narrow or broaden your search with keywords or Boolean Operations?
- Was the site/source that you started with useful for your purpose? Why or why not?
- How did you select the sources you used?

Section II: Indicate the time spent, separately, on search and writing.
- How many hours did you spend on searching and evaluating information?
- How many hours did you spend on writing and revising your report?

Section III: Write a summary of information and explain reasons for choosing sources
- Write a summary of research information.
- What is your source about? Who wrote it? How was the information found? Why is this information important to your topic?
- What criteria did you use to select each source?
- How many total sources did you select from?
- How did you decide which sources were useful? Explain why.

Section IV: Reflect on your learning experience.
- What did you learn about in terms of the broad subject (chromatography), discipline (chemistry), information management (finding and using resources), and/or time
management?
- How would you manage your time differently if you did this assignment again?
- What advice would you give to another student working on this assignment?
- What do you think of chromatography and its application for your life?

General advice
Utilize campus resources such as your Undergraduate Services Librarian and the Writing Center peer tutors effectively. Manage your time well with pre-writing invention guideline, Gantt, or timeline chart. Examine the accessibility level of your search outcomes; for your comprehension, avoid too difficult articles. Avoid commercial sites with potential bias and checking only the first few sites or just hopping into the databases without strategizing your plan and adjusting for the best outcome. Making a plan ahead of time will make the research process faster and easier overall. Remember to document well and reflect your journey of learning process and outcome. Keep journaling your learning process with lessons learned, challenges faced, and problems solved.

Advice from the former students who completed this project
“I really struggled to stay organized and would encourage other students undertaking this project not to procrastinate”. “I would do more research to begin with and find more articles to use with depth keyword development because this assignment was more about the process and learning experiences, development.” “I learned that keywords are important in research; even a minor word change will provide different resources.” “I will first ask for help if I need further information or basic ideas of the topic, or tell my friend to be clear on research topics, because this will decrease the time me or my friend spend on research significantly.” “I would advise students to be proactive when it comes to this topic, or tell your friend spend on research significantly.” “I would do more research and find more articles to use with depth keyword development because this assignment was more about the process and learning experiences, development.”

In-Class Librarian Workshop, Writing Center Peer Tutoring Submission
The Librarian workshop includes web resource evaluation, search strategies, database, section guidelines, citation, and questions from your preliminary work. If you miss the workshop, make an appointment for individual session with the Undergraduate Services Librarian. Follow the Writing Center Guideline for making an appointment at https://polytechnic.k-state.edu/writingcenter/ for a date at least 2 days before due date.

Submission
Submit the final electronic file into CANVAS, AND submit compiled paper copies of final report, draft(s), preliminary worksheet, communication note with the writing center.

Grading Rubrics

<table>
<thead>
<tr>
<th>Section</th>
<th>1-2 points</th>
<th>3-4 points</th>
<th>5-6 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>search path</td>
<td>unclear insufficient</td>
<td>somewhat clear and reasonable with a few questions</td>
<td>clear, reasonable, relevant</td>
</tr>
<tr>
<td>Section II</td>
<td>1-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>time spent</td>
<td>no consult no revision</td>
<td>consult library or writing center poorly revised</td>
<td>consult library and writing center, well revised</td>
</tr>
<tr>
<td>Section III</td>
<td>1-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>summary source</td>
<td>1 or 2 sources</td>
<td>2 or more sources lack of criteria</td>
<td>2 or more sources logical criteria</td>
</tr>
<tr>
<td>Section IV</td>
<td>1-2</td>
<td>3-4</td>
<td>5-6</td>
</tr>
<tr>
<td>reflection</td>
<td>no or poor</td>
<td>reasonable</td>
<td>Insightful, well done</td>
</tr>
<tr>
<td>Section V</td>
<td>overall quality listed below</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0-1 The paper is unacceptable because it does not me meet requirements.
2-3 The paper ignores the questions asked or has major content problems.
4-5 The paper is incomprehensive due to poor organization/presentation/development.
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6-7 The paper suffers in quality with insufficient information.
8-9 The paper presents the work with insufficient and/or irrelevant reasoning or criteria.
10-11 The paper presents the work with reasoning and criteria but does not provide reflection.
12-13 The paper presents good work with reasoning, criteria and reflection, but shows weakness or problems in certain area.
14-15 The paper meets all the criteria and the writer understands the purpose of the assignment.

Worksheet Example to follow

Plan on time management

<table>
<thead>
<tr>
<th>Action item to do</th>
<th>Planned</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work on preliminary work to bring a draft for in-class librarian workshop and complete draft with Section I and III within three and four days after the In-class librarian workshop activity.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write a report draft with Section I, III, and IV and obtain the Writing Center peer tutor feedback at least two-three days before the due date.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revise the report and complete with Section II. and submit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Check before submitting your work:
If you have not participated in In-Class librarian workshop, when was individual session? ________
If you have participated in Writing Center Peer Tutoring, when was? ________

Make a worksheet with following example questions and fill before, during, after your work.

Plan ahead: Fill this before you start

<table>
<thead>
<tr>
<th>My field of study/major is</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Key words to consider using are</td>
<td></td>
</tr>
<tr>
<td>Search engine or database that I use usually are, because</td>
<td></td>
</tr>
<tr>
<td>I plan to use this database (or search engine) first, because</td>
<td></td>
</tr>
</tbody>
</table>

Action/Process to find/evaluate information: Fill this while you do search

| First set of search tools used are |         |
| First set of key words used are |         |
| Initial search outcomes are (or are not) matching to my expectation, because |         |
| I need to narrow or expand my search option, areas, etc, because |         |
| Changes that I am making are (e.g. key words to --, database change to --) |         |
| I need to work on more, because |         |
| Initial evaluation search sources and outcomes are reasonable, because |         |
| I think that I have reasonable sources to work, because |         |

Action/Process to make summary:

<table>
<thead>
<tr>
<th>Source</th>
<th>It talks about</th>
<th>I did follow up/additional work after reading this article</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time tracking: Initial session starting and ending and follow-up session starting and ending date/time, etc

Notes during the search process and after your search process to reflect:
questions, ideas, lessons learned, challenges, suggestions to myself, peers, teacher and librarians, ----.
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Please complete this checklist and submit it on top of the packet of assignment you submit.

_____ I have all the materials in the packet.
worksheet to follow in the assignment guideline P3 or similar work management follow up
sheet
additional notes during the librarian workshop and while working on this project. Print the
complete Grammarly’s “uncorrected score sheet + analysis (which includes the
margin comments)

_____ I have addressed all parts of the assignment.
search path, time record, a summary of research information and criteria of chosen sources,
reflection about chromatography, chemistry and my discipline, information and
time management

_____ I have utilized all available resources to improve the quality of my assignment.
_____ librarian consultation about the appropriateness and relevance of the articles
chosen
_____ Grammarly tool for help on writing skills and writing related problems

_____ I have uploaded the final version of e-file in CANVAS using suggested title and format.
Format with 1.5 or single spaced using 11 to 12 font size, with a heading for each section
All sources in the bibliography are formatted in APA citation style
Title as year semester assignment title _ first name last name such as
2019 Sp Chromatography John Doe

_____ I have addressed my endeavors to complete this assignment, examined the connection
between my field of study and chemistry, and reflected lessons learned, and challenges
faced.

Additional comments to add: