

Lab 1 - RQs - How to Devise Research Questions (GROUP)

Start Assignment

- Due Sunday by 11:59pm
- Points 100
- Submitting a file upload

Objective

To provide you with a start toward thinking rigorously about an RQ for our collaboration.

Recipe Ingredients

- Your brain
- A pencil+paper or electronic document
- 1-2 team members (please identify your teammates in each person's submission, but each person should submit individually)
- [Slides with the activities \(https://psu.instructure.com/courses/2416265/files/181117653?wrap=1\)](https://psu.instructure.com/courses/2416265/files/181117653?wrap=1)

Place the **output of all activities in a single document** so we can see your work as we forge a good RQ.

For this reason, if you have an idea and abandon it, we would prefer you **provide the reason for abandonment and then strike it out** instead of deleting it.

Your Tasks

1. **[TURN THIS IN, 15 points]** *Brainstorming*: Individually, write down 3-5 RQs applying about a topic. You may find it helpful to refer to your reflections or what you wrote in your "Introduce yourself" submission. You may additionally find it helpful to start with the topic and have a conversation with a teammate or member of the teaching team
2. *Determining RQ Types*: In consultation with 1-2 teammates:
 - A. Take turns verbalizing an RQ from your list.
 - B. **[TURN THIS IN, 10 points]** As a group, determine what kind of question you have.
 - C. If you wish you had different ones, change them!
3. **[TURN THIS IN, 10 points]** *Making RQs Win-Win*: In consultation with 1-2 teammates ask: Is this RQ Win-Win? If not, work together to change it!
4. **[TURN THIS IN, 30 points]** *Search strings*: Convert your RQ into a search string that you can apply to a digital library (E.g., ACM Digital Library, IEEE Xplore, DBLP, Scopus, etc.). Check in with your teammates for suggestions on improving the search string. Recall conjunctive normal form (CNF) and the importance of synonyms as found in the papers from the next class.

5. *Finding Related Work*: Individually, do the following while showing all your work, as in the lab.
- A. **[TURN THIS IN, 5 points]** Apply your search string, report on how many results it obtained.
 - B. **[TURN THIS IN, 30 points]** Inspect the abstract of the top couple hits and briefly describe two pieces of the seemingly most-related work. Also be sure to characterize to what extent these resources are helpful in addressing your underlying RQ.
 - C. If someone else has already answered your RQ definitively or you are unsatisfied with what the string retrieved, then refine either further OR pick another RQ from your list and repeat the search.