

**CMPSC 580
Junior Seminar
Spring 2021**

Assignment 7:

Writing the Related Work



Figure 1: Your Related Works section is to describe the deliverables of others (i.e., ideas, theory, tools, and similar) which are used to support your own project work. In this section of your proposal, you will describe other works which are relevant to your project and its goals. Your discussion will aim to describe why these works are relevant to your discussion.

The ‘Related Work’ Section

In assignment, we will be considering the *Related Work* section. As mentioned in Figure 1, this section is designed to add detail about what is already known concerning your research area, its theory, practical applications, accepted tools, popular research in the field and some of the main knowledge that has been determined and collected by investigators before you. The ideas that are discussed in this section have been almost entirely derived from the peer-reviewed literature (i.e., not blogs, not websites, not opinion pieces and similar). The idea behind peer-reviewed scientific literature implies that the correct usage of the scientific method, data usage, ethics, and other factors, have been appropriately employed and verified by knowledgeable reviewers of the source.

In your work, you are to strategically use the ideas from primary-source articles so that their ideas support your proposal. While positioning your work in a scientific and technical light, the point of the Related Works Section is also to demonstrate your mastery of the subject area. Here, you are to weave a story from your literature review to describe the major events of the research such as its discovery, early thinking and early solutions, tools, algorithms, etc., which have been applied to the research area in some way. From each of your articles, you will mention some important piece of information to be used to build foundational support for your own work.

The "Related Work" section story that you write will also show that you are competent and familiar with the background of your project area. This discussion showcases a complete and well-thought-out understanding of the research associated to the problem you propose to study. This discussion will also allow the reader see how your research is connected to other types of current research.

Clone Your Assignment Repository

Today's assignment repository can be found at the below link to a GitHub Classroom repository. Here you will work on your assignment and then push your work to the cloud where the instructor will be able to view your work for grading. Often, there will be files in your assignment repositories which you are to edit before you submit them by using the below commands for `git`. Note, you will be using this same repository to complete your proposal section by section. You will be adding your sections to the `SeniorThesisProposal.tex` document.

<https://classroom.github.com/a/lP9rBMmB>

To use this link, please follow the steps below.

- Click on the link and accept the assignment
- Once the importing task has completed, click on the created assignment link which will take you to your newly created GitHub repository for this lab,
- Clone this repository (bearing your name) and work locally
- As you are working on your lab, you are to commit and push regularly. The commands are the following. GitHub Actions CI will automatically check that your \LaTeX file builds correctly.

```
- git add -A
- git commit -m 'Your notes about commit here'
- git push
```

- When you are ready to create a release and submit a PDF of a section, you must tag your release using the following commands, replacing my name with your own and changing the version number appropriately.

Note: minor changes to your document would be reflected by incrementing the right-most number in the version by one. Larger changes will alter the middle number and left-most numbers.

```
- git add -A
- git commit -m 'Your notes about commit here'
- git tag senior.thesis.proposal-obonhamcarter-1.0.0
- git push -u origin main --tags
```

Please be sure to read the `README.md` file to help with your push tasks. After you have pushed your work to your repository, please visit the repository the GitHub website (you may have to log-in) to verify that your files were correctly sent.

Getting Ready to Write

You can read more about this section from the following resources:

- McDaniel's lecture notes at Pennsylvania State University,
 - <http://www.cse.psu.edu/~pdm12/cse544/slides/cse544-relwork.pdf>
- Lee's presentation (U Penn)
 - https://www.seas.upenn.edu/~cse400/CSE400_2008_2009/related_work.pdf

Part 1: Due next class; your survey of peer-reviewed articles

In your final proposal, you will cite and list between eight to fifteen articles in your Bibliography Section. In this part, we will learn the method that you will use when determining whether to add an article to your work. For instance, with each article that you read, you are to consider its worth to your project – if this worth adds value to your project, then you could choose to add the article. Select at least eight articles that can help situate your proposed project, then for each article answer the guiding questions below in a bullet point format. Please note, you will want to look for current articles (three years old or younger) for many of your references, although not all your articles will be this young.

Choose three **highly relevant** articles to your proposal to complete a survey. For these articles, you are to ask yourself the following questions.

1. What is the article about?
2. What was the methodology, tools, theory and etc. used in article's research?
3. What were the results and their implications?
4. How is the article relevant to your own work, approach, tool, etc.? How is the article in support of your own work? Why are you talking about this article?

To respond to the questions, please use the Google Form at the below link.

<https://forms.gle/Mf3NPiefeAhRPuDJ8>

Part 2: Also due next class; your simple outline containing eight articles

In the style that you used to create your Introduction section, you will be creating and editing an outline of the “Related Work” section to fill-in the a significant portion of the foundation of your work using peer-reviewed articles. You may have to complete a literature review using online search engines to find articles for your work. **Please note, that you will have about eight (8)**

articles included in this outline. These articles must be woven-together in some way to create several themes of thought and discussion in the section.

For your outline, you will use the bullet points similar to those shown below to complete this *simple* outline. In your `SeniorThesisProposal.tex` file, under the Section “Related Work”, please create a section called “Outline.” You will add your simple outline into this section of the `SeniorThesisProposal.tex` document. This file is located inside your project proposal repository.

Related work Outline

Theme A ...

Point 1 from article...

a. Supporting ...

b. Supporting ...

Point 2 from article...

a. Supporting evidence ...

b. Supporting evidence ...

Theme B ...

Point 1 from article...

a. Supporting ...

b. Supporting ...

(and so on)

Part 3: During following class; peer-review of the outline

Once you have identified all your articles for your references and integrated them into your outline, you will be ready to begin the peer-review activity for your Related Words Section. Here class members are to interview each other while following the questions at the below Google Doc . In addition, you are to provide feedback to your colleague to and to comment on the perceived relevance of the chosen articles. *If you are not present in class when we complete this activity, then please find a person to work with to complete this activity.*

<https://forms.gle/Ppkj9PiW7Dgit25Z9>

1. The outline covers the Related Work section of a technical senior thesis proposal.
2. The outline includes a main idea.
3. The outline includes a list of the topics and major points that support the main idea, for example, types of relevant research and specific articles to support each type of relevant research.
4. The outline includes supporting arguments and evidence for each topic or point, for example, each article summary includes the description of the article, its methodology and key findings.
5. The outline includes concluding ideas, for example, how specific research type is relevant to the proposed work.
6. The plan for the Related Work section has a logical flow.

Part 4: During next lab; a lightning talk of a prominent theme

During the next lab, we will have lightning talks where you introduce your colleagues to some of themes of your Related Works Section. It is assumed that there will be several themes in your Related Works Section. In the talk, choose one theme and one or two articles that you choose to add support to the discussion of the theme.

What are themes?

What are themes, you ask? Let's look at an example; if your proposal concerns building a game to teach the player something or some set of skills, then two reasonable themes to support this work would be;

- *Why there is a need for computer games for teaching*
- *What are other for distance learning technologies and games that already exist to teach skills (of any kind)*

Other reasonable themes may concern,

- *What age-groups are would most likely benefit the most, according to published research, from learning by playing educational games*
- *Discussion of whether players of this age-group are expected to learn more conveniently from a game than they would by other methods of teaching (i.e., in a classroom setting)*
- *Discussion of the benefits of teaching skills through the use of game-play*
- *Discussion of the advantages and disadvantages of using games in any kind of education*
- and similar types of supporting information

In your talk, please give an example of a theme in your proposal and then introduce some supporting information taken from the article(s). Be selective for your two or three minute talk.

Summary of Deliverables and Tasks

The dates of the below events in bold have been added to the course calendar.

1. Part 1; Due Tuesday (20th April) in class: **Survey of three of your eight highly relevant articles**
2. Part 2; Due Tuesday (20th April) in class: **A draft of your Related Works outline**
3. Part 3; During Tuesday(20th April) in class: **begin peer review session of your outline**
Due Thursday (22nd April)
4. Part 4; During Tuesday Lab session (20th April): **a lightning talk to describe some of the themes of your Related Works Section**

Evaluation

You will receive notices in class with the assignments and the deadlines of each section's deliverable. The failure to complete and submit drafts of each section by the stated due date will result in a reduction of your proposal grade. Failure to participate in peer editing process will result in a failed participation grade for that activity.

Specifically, the grade that a student receives on the senior project proposal will have the following components and percentages:

- **Survey from Part 1** [A check-mark grade]
- **Outline draft** [up to 60%]:
- **Peer review** [up to 40%]: This grade incorporates the the effort you show in reviewing the work of another member of your class.
- **Lightning Talk** [A check-mark grade]

Help?

Please let the instructor know of any questions that you may have. Please use email or make office-hour appointment slots if you would like to discuss an issue.