Week 3: Asynchronous Design Studio

Journal Articles and Citation

Overview

The purpose of this worksheet is to serve as a resource on conducting research, utilizing journal articles and how to properly cite articles. You are not required to hand-in this worksheet. For required worksheets, please navigate to your project-specific worksheets found on Avenue to Learn under [4-Design Studios → Week 3 → Asynchronous Design Studio]

Stage 1: Journal Articles

For this stage we will be citing the “Research Skills for Engineers” textbook on eCampus Ontario. We will be focusing on module 4 found [here](https://ecampusontario.pressbooks.pub/engineeringandinformationresearchskillsforengineers/chapter/module-4-journal-articles/). Please complete the module and use the following section to document your notes.

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| * Researchers share their findings by writing journal articles * Journal: Publication that publishes articles in a particular discipline or area of study on a regular basis   + Scholarly magazine * Article: report that outlines the findings of a research published in a journal * Peer review: having an article viewed and evaluated by others knowledgeable in the field of research   + Assesses quality and validity of research   + Quality control for articles   + Determines whether article is published, revised, rejected * Most journal articles are peer reviewed * Structure of a research paper IMRaD   + Intro – understand why research was done, motivation, research question   + Method – how data was collected, details about techniques   + Results – findings generated from research   + Discussion – results interpretation and elaboration   + Conclusion and abstract – summaries of article * Three pass approach   + Read a paper in 1 pass     - Read title, abstract, intro, headings, conclusions     - High level idea of paper’s concepts     - Lets you decide if you need to keep reading   + 2nd pass     - 1 hour – read figures, diagrams, references     - Should be able to summarize main points of the paper   + 3rd pass – reimplementing the paper     - Challenge presented ideas and evaluate the paper     - 4 – 5 hours * Finding journal articles   + Online journals, google scholar, database   + View google scholar results at mcmaster library   + Library database     - Collection of journals from different sources     - Typically for certain disciplines     - i.e. Engineering Village * Search strategy   + Search terms used to browse a database     - Identify main topic, list potential search terms, combine with Booleans * Engineering Village   + Platform for searching engineering databases     - Compendex and inspec   + Has automatic citation through mendeley |

Stage 2: Citation

Now, navigate to [Module 7 - Citation](https://ecampusontario.pressbooks.pub/engineeringandinformationresearchskillsforengineers/chapter/module-7-citation/). Please complete the module and use the following section to document your notes.

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| --- |
| * Citation   + Reference to a source that acknowledges the work of others   + IEEE – citation style for engineering   + Role of citations     - Give credit where credit is due     - Direct reader to original idea’s source   + Must cite if you quote directly, use facts or ideas from a source, introduce information that is not common knowledge * IEEE   + Institute of electrical and electronic engineer   + Most used citation style in technical field   + In text citations are numbered in square brackers in line   + Referwence list is organized numerically at the end of the report     - Author(s)’s name, title of document     - For journal, also specify volume, pages, date of publication * Citation management   + Collect organize cite and share reference and sources   + Generate bibliographies   + Works by collecting sources, importing to library, cite while you write, generates bibliography   + Common citation manager     - Endnote, Mendeley, Zotero * Zotero   + Zotero.org/download + chrome extension |

Stage 3: Analyzing a Journal Article

This section of the worksheet is intended to help you analyze articles in your future search. You do not need to complete this table right now, but it is highly recommended to keep it as a resource for your future reference.

|  |  |
| --- | --- |
| **Analyzing a Journal Article** | |
| Article title: | |
| Step 1: What is the objective of this study? | |
| a. Write down the exact statement in which the authors describe what they were testing. This may be provided as a purpose statement or a hypothesis. Include quotation marks around the exact wording and indicate page number(s). |  |
| b. Describe the purpose of the study, as you understand it, in your own words. |  |
| c. What is the gap in the previous research that the authors are trying to fill by conducting this study? |  |
| Step 2: What are the major findings of the study? | |
| a. What are the authors’ major conclusions or findings? Include quotation marks if using exact wording, and indicate page number(s). |  |
| b. Write those conclusions, as you understand them, in your own words. |  |
| Step 3: How did the authors test their hypothesis? | |
| a. Briefly summarize the main steps or measurements that the authors used in their methods. May include type of study (survey, observation, etc.), how, where and when data was gathered, study population. |  |
| b. How did the authors analyze their data? What test(s) did they use? |  |
| Step 4: How reliable are the results? | |
| a. Do the authors suggest any problems or limitations with their methodology? Do you see any problems or limitations with their methodology? |  |
| b. Do the conclusions made by the author make sense to you? Are the conclusions too broad or too narrow based on what was actually done in the study? |  |
| Step 5: What is the importance of this research study? | |
| a. Write (in your own words) the significant contributions of the research in this article as reported by the authors. |  |
| b. What are the implications of the study for the way we think about the topic? |  |
| Step 6: How does this study relate to other research in this field? | |
| a. What prior research do the authors discuss? Look at the reference list. What are the topic/themes of the resources cited? |  |
| b. What are the next steps or future directions for this research as described by the authors? |  |
| c. What questions about this topic do you have after reading this article? |  |

Adapted from

* Student Worksheet: Analyzing a Journal Article. <https://www.lib.uoguelph.ca/sites/default/files/student_worksheet.pdf>. University of Guelph. 2013
* Information Literacy Toolkit: How to Read a Scholarly Journal Article. <https://legacy.lib.utexas.edu/signaturecourses/resources/how-read-scholarly-article>. University of Texas at Austin, University of Texas Libraries. 2013.

Submission Instructions

There is no submission requirement for this worksheet. For required worksheets, please navigate to your project-specific worksheets found on Avenue to Learn under [4-Design Studios → Week 3 → Asynchronous Design Studio]