Case studies for Design Informatics 1

Tutorial 1: Finding and Reading the Literature

Adaption of Tutorial developed by Maria Wolters

In this tutorial, we will explore the ACM Digital Library, which will be your main literature search tool for the first Coursework in CDI1. Most of the literature relevant to design informatics is in the fields of in HCI and Design. Keeping up with this can be difficult. Unlike other fields, where it is enough to subscribe to the table of contents of the main journals in the field, most papers are published at conferences, with relatively quick publication cycles.

The tutorial will start with introducing yourselves and taking attendance.

The Tutor will then ask a discussion thread to the TEAMS chat for your group, where you answer a simple question: How good do you think you are at searching the research literature in the field where you received your previous degree? (good / average / poor?).

Then, you will work through a list of individual activities with group discussion. After each activity, you will document it in the TEAMS chat and the tutor will provides you with feedback.

Activity 1: Explore the ACM Digital Library. [10 minutes]

Click on the Conferences page and find four conferences that you believe are directly relevant to design informatics. Post your result on the Teams Chat.

Group discussion: You will then briefly discuss the conferences, and your tutor will highlight some of the main conferences in the field – such as CHI, DIS, CSCW, TEI.

Activity 2: Search the ACM Digital Library

Activity 2.1: No Refinement [15 minutes]

Let's see how we can find papers through very simple search queries.

Go back to the main page and enter "blockchain" in the search box. How many results do you find? Note down the number.

Next, take a note of the three highest ranking papers. For each of those papers, click on the paper title, click on the Export Citation button (it's the button marked "). You can export the citations in three formats - BiBTeX, which is useful when you use LaTeX for writing, EndNote, which is understood by all major citation management software, and ACMRef, which is the reference for the paper in the ACM bibliography style. Go to the ACM Ref view and copy and paste the citation into a document. Write down how often each of these papers has been cited (", blue) and downloaded (upward arrow, purple).

Next, click on “Recency”, and select “Downloaded”. How many of the top five results are actual papers? How many of the papers in the top five results are directly related to design informatics, or human-computer interaction? Post those numbers into the TEAMS chat.

Group discussion: Once you are done, your tutor will discuss the results with you.

Activity 2.2: With Refinement [15 minutes]

When you search for papers on a topic, sometimes it can be good to restrict yourself to the conferences that are specific to your field. Go to the main page for the CHI conference and enter “blockchain” in the search box here this time. How many results do you find? Note down the number.

Next, collect the references in ACM Ref format for the three highest ranking papers according to recency.

After this, click on “Recency”, and select “Cited”. Scroll down until the papers start. Several of these papers are not obviously about “blockchain” at all. See if you can find two or three, to exclude from your search.

Also, can you find the Design Informatics staff members who co-authored one of the papers?

In the Group: Once you are done, your tutor will discuss the results with you.

Activity 2.3: The Effect of Different Keywords [20 minutes]

Now let’s explore the influence using different keywords on a topic can have, using work on the topic of self-tracking as an example. Self-tracking is an area of research that typically focuses on designing and evaluating data-driven application to help people track their health, wellbeing, and other aspects of their lives – very relevant to design informatics.

Go to the main page for the CHI conference and enter “self-tracking” in the search box. How many results do you find? Note down the number.

Next, click on the box next to the first three Research Articles, and click on Export Citations (box icon with an arrow going through it). Export the references in ACM Ref format. This allows you to copy the reference in ACM format, or to download it to your computer.

Repeat this for the term “self-monitoring”.

And then, again repeat this for the term “quantified self”.

These are all different terms that are related to “self-tracking”, but using them brings up quite different papers and results.

In the Group: Once you are done, your tutor will discuss the results with you.

Activity 3: Using a Paper as a Seed Paper [20 minutes]

Identify the paper on the list of references that you have compiled so far that you find the most interesting, and has more than five citations. Go to the web page for that paper. (Tip: Copy and paste the URL that contains doi.org, and it will take you to the correct page.)

Click on the information button (small i in a circle, right hand side). Make a note of the Author Tags and post them onto the TEAMS chat. You may need to scroll down to see them. This will give you a list of new keywords associated with this paper to search for further papers.

Next, go to the Bibliometrics and Citations information. To do this, click on the upward arrow below the information button. Then, click on View Citations. This gives you a list of all of the papers that have cited this paper. Find two follow-on papers that are of interest to you and post the links in the TEAMS chat, with a short explanation of why you find them interesting.

Finally, go to the list of cited references (this is below the abstract on the paper's page on the ACM DL), identify two papers that are of interest to you, and post them into the Teams chat. Focus on actual papers, not web links. You will see that all of them are linked out to Google Scholar, and some are also linked to the publisher.

In the Group: Once you are done, your tutor will discuss the results with you.

Conclusion

You have learned several strategies for finding relevant papers:

- **make a list of keywords**. If you are stuck, look at papers that you already have and that are relevant to your topic. Use their keywords or important concepts that occur in the abstract and title.
- **narrow down your sources**. Sometimes, as we've discussed a lot in CDI1 so far, the same term (e.g., "design") can have very different meanings in different fields, e.g. circuit design versus design of human-computer interactions. If you focus on relevant sources, you are more likely to get relevant papers.
- **focus on established sources first.** For a first search, make sure you know what the main conferences and journals in your field are, and start there. A good start is to focus on conferences and journals that are on the SIGCHI page: https://sigchi.org/
- **seed papers**. If you have found key "seed" papers, do a forward and backward search - which papers are referenced? Which papers cite your seed paper?
- **paper importance**. Popularity of a paper may indicate that it is central to a field. The two main metrics are citation frequency and download frequency.

Further Resources on Referencing

- See this website for guidance on ACM Reference formatting: https://www.acm.org/publications/authors/reference-formatting
- Consider using a reference manager like Zotero to help manage your references in bigger assignments: https://www.zotero.org/
- For further resources and help on referencing, please see the Institute for Academic Development Study Hub: https://institute-academic-development.ed.ac.uk/study-hub/learning-resources/referencing-and-citations