EMDSV Assignment 3: Literature Review & Research Plan

Assignment 3 consists of two parts. First, you conduct a literature review and then create a research plan based on it.

Each student must submit an individual assignment. Use the appropriate template for submitting your work. Upload a .pdf file with the name: A3_First name_last name. The assignment must not exceed 6000 words (excluding: references, table of content, any appendices, and any text in tables or graphs).

Initially, you need to identify and write about a research problem you wish to investigate. By arguing with (and referencing) the academic literature you read, the research problem will become clearer and more delimited, allowing you to finally formulate a research question that forms the basis of your literature review (part 1). Having reviewed the selected literature and gained deeper insight, you might need to refine your research question for the empirical research plan you then need to develop subsequently (part 2). Therein, you need to describe what kind of empirical study you will conduct and clearly delimit the scope in topic and time. Throughout your assignment, you should motivate and substantiate your arguments using the academic literature (course book, other books, journal articles, reports etc.).

Assignment 3 instructions (process)

*Part 1. For the first part of this assignment (**literature review**), you need to:*

Read/watch the teaching material from lectures, workshops, etc., and read about conducting a literature review in our coursebook (O'Leary 2021, Chapter 6 '*Reviewing literature*' as well as: https://methods-sagepub-com.ezp.sub.su.se/project-planner/reviewing-the-literature.

1. Using the academic literature, describe a **research problem**. This should be a problem of general interest, and you need to motivate why it is relevant and describe how it relates to research subjects in computer and systems sciences[1]. (approx. 350 words)
2. Derive a **research question** from the research problem and motivate why this particular question as part of the research problem is relevant. It should be clear how the answer to the research question solves a part of or the entire research problem. (approx. 150 words).
3. Perform a **literature review** to answer your research question: Collect at least 5-7 peer-reviewed (!) key research articles. Transparently describe your process of searching the literature (e.g. databanks) and the criteria used for selecting these particular articles. In your literature review, you should summarise, synthesise, and critically evaluate the articles. You should also aim to identify patterns among the articles, such as, e.g. consensus (or disagreement), inconsistencies, problems, discrepancies, or research gaps.
4. Conclude your literature review by briefly **summarising** your insights from the literature review. Then provide **arguments** on how your (maybe now refined) research question could be answered with empirical research using a (a) qualitative, (b) quantitative or (c) mixed approaches. This will lay the foundation for the subsequent research plan.

Maximum word count: 3000 words (excluding references).

[1] See https://www.su.se/department-of-computer-and-systems-sciences/research/research-subjects for an overview of our departments research subjects

*Part 2. For the second part of this assignment (**research plan**), you need to:*

Read/watch the teaching material from lectures, workshops, etc., and read how to create a research plan in our course book (O'Leary 2021, Chapter 7: *Designing a Research Plan).* Your research plan (only formulating a list is insufficient) should include the following:

1. Describe **what** kind of data (qualitative and/or quantitative) you need to answer your research question. Consider if your research question targets, e.g. deep insights into peoples' personal experiences and/or requires, e.g. a large data sample to represent a population over which you wish to generalise.
2. Describe the study population and your sampling approach: **Who** participates in your study, and how do you find participants? Whom/what will your results represent or has the potential to be generalised to? Motivate your choices, reflect on potential pitfalls and biases, and describe means for overcoming these.
3. Describe **where** you will conduct your study in terms of the geographical area and locality (e.g., lab, at home, online…). Describe how and where the collected data will be stored. Also, reflect on any potential legal/ethical implications of these locations.
4. Describe **when** you will conduct your empirical research with a feasible time plan detailing the different steps of your research.
5. Describe your overall *research strategy* (Denscombe, 2014[2]), i.e. **how** a) you plan to collect your data. Choose one or a combination of data collection methods; **how** b) you plan to use method(s) for analysing your data in detail; argue c) **how** and why these data collection and analysis methods can deliver the insights you need for answering your research question, and d) explain **how** they integrate and complement each other.

   RESEARCH STRATEGY OPTIONS:
   - 5.1. Qualitative strategy: Design an applicable guide based on your choice of data collection method/s.
   - 5.2. Quantitative strategy: Design an applicable guide based on your choice of data collection method/s. This guide should identify scales of measurement based on variables derived from your research question and literature review.
   - 5.3. Mixed approaches strategy: Design an applicable guide based on your choice of combined qualitative and quantitative methods for both data collection and analysis. You also need to decide and motivate their order of usage, how they complement each other, and how they can provide more insight than a single approach to answer your research question.
6. Reflect on **ethical considerations** regarding your empirical research plan and explain how your research aligns with and promotes good research practices (check the document from Lecture 2).

Maximum word count: 2500 words (excluding, e.g. a potential interview guide/variable list etc., and the time plan).

In general, for the whole assignment (parts 1 and 2):

- Cite, quote, and reference your sources correctly and consistently following the APA 7th ed. citation style : [https://apastyle.apa.org/style-grammar-guidelines].

[2] Denscombe 2014: Part 1, "Strategies for social research": http://link.sub.su.se/sfxsub?url_ver=Z39.88-2004&ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rfr_id=info:sid/sfxit.com:opac_856&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx&sfx.ignore_date_threshold=1&rft.object_id=3710000000326305&svc_val_fmt=info:ofi/fmt:kev:mtx:sch_svc&

Assessment criteria

For 1 point, you should:

- Identify and motivate a research problem that you can solve by answering the subsequently stated research question related to computer and system sciences research.
- Formulate a research question that is both unambiguous, answerable and not “naive” (meaning that it is not answerable with Yes/No).
- Transparently describe the process and criteria used for your literature search and selection.
- Review at least 5-7 peer-reviewed (!) scientific articles connected to your research problem/question by summarising and comparing the selected literature.
- Present your literature review in a well-structured narrative and summarise your insights.
- Clearly describe your choice of an empirical research strategy and the research methods used, and motivate them based on your research question.
- Cover all research plan aspects (*i.e. WHAT, WHO, WHERE, WHEN, and HOW*).
- Design an appropriate empirical research guide for the kind of data to be collected, to be located in the appendix of the assignment.
- Discuss at least one potential alternative research strategy and at least one alternative empirical research method for data collection and analysis that could be used to answer the research question.
- Detail any tools selected for data collection and analysis (SPSS, MAXQDA, etc.).
- Discuss relevant ethical considerations concerning your research plan.

For 2 points, you should fulfil all of the above and additionally:

- Define clear and relevant delimitations of your research question and motivate it convincingly using academic literature.
- Critically evaluate (by, e.g., identifying gaps, inconsistencies, disagreements, contradictions) the results, methods, and theoretical frameworks in the literature.
- Motivate your choice of empirical research approach and any specific method by providing arguments grounded in the course literature and/or other academic literature, e.g. by referencing studies in the field that use a similar strategy, and defend your choice of research method variant (e.g. why face-to-face interviews and not group online interviews, or why certain survey items and not others).