Writing a Literature Review and Research Proposal

1.   INTRODUCTION

This workshop will help you to understand the requirements for writing your literature review and outline of your research (proposal) for Assignment 2.

2.   THE ASSIGNMENT

Task 1: Literature Review
Prepare a report (around 10 pages) containing a critical review of the previous works you have found related to your research topic. The report should include around 15-20 properly referenced conf. or journal articles and/or books and highlight the gaps you identified in the literature. Organise the review around the questions or claims relevant to your research rather than just listing the papers you have read.

3.   ACTIVITY 1: WHAT ARE THE DIFFERENT PURPOSES OF A LITERATURE REVIEW?

Discussion: Why should I write a literature review?

4.   BEGINNING STEPS IN WRITING YOUR REVIEW: GROUP YOUR LITERATURE

- **Core works:**
    - a very small number of specific topic areas, issues or even authors. Maybe two sets of core works for synthesis studies.
    - may begin with one author and approach the
- **Indirectly related works: these may not be used at all**
    - a single point of contact and only "passing relevance"
    - often appreciated later in the process problem as "reaction" to their work.
    - often limited in number
    -
- **Directly related works:**
    - studies or authors related directly, e.g. focused on the same question, issues, methods, data, etc.
    - probably larger list than the core works

5.   DEVELOPING AN ANALYTICAL AND LOGICAL FRAMEWORK FOR THE LITERATURE

There are many different ways you could organize your literature review, including:
  ➢ according to **various topics and sub-topics** which are central to your study
  ➢ according to **different points of views**
  ➢ according to **various research questions** to be asked
  ➢ according to **specific variables** in the study
  ➢ according to **different methods/approaches**

> - **chronologically** from oldest to more recent research
> - OR a **combination** of these.

Your keywords and headings in **your synthesis grid** can show:
1. how you have classified or analysed the literature for your topic into relevant parts
2. how you have sequenced these in a logical way to lead up to your own research project.
3. how you have linked your keywords and headings to your title.

You can use your keywords and headings to develop your table of contents.

6.   WRITING THE INTRODUCTION TO THE LITERATURE REVIEW

Activity 2:
Identify the stages in the introduction. The broad stages are: 1. Orientation to the topic; 2. Introduction to key research areas; 3. Gap; 4. Scope / Methods.

Literature Review: Automatically Measuring Consistency Properties of MongoDB	Stages
1 Introduction The exponential growth of web applications and its dependency on data has driven the widespread adoption of NoSQL databases over traditional relational databases. This is due to attractive features offered such as high availability and low latency. However, this is achieved at the cost of weaker consistency properties. This literature review involves the appraisal of consistency models and properties, existing benchmarks and metrics to measure properties of NoSQLsystems and MongoDB1, a well-known NoSQL database. Whilst these areas have been presented in a variety of contexts, this paper will primarily focus on their application to distributed database systems.	

7.   IDENTIFYING CRITICAL / PERSUASIVE WRITING

Activity 3:
Identify the evaluative language used in this passage:

Gunter & Terry's work was focussed heavily on the costs and risks surrounding litigation and privacy of patients and did not analyse the level of participation from users on both ends. In particular, though the implementation of EHRs will eventually become compulsory in many states internationally, the quality and accuracy of data input was not analysed, especially in the context of older practitioners who may not be computer literate. The article lacked in quantitative analysis on the efficacy of EHR systems, where metrics such as latency and accuracy of users may be indicative of the gaps in the system implementation that could be addressed in the future.

The lack of investigation into user participation is addressed by Tsai & Starren [4], which focusses on the role of patients' interaction within the digital system. The use of EHRs allows for better analysis of all health histories, especially when in the form of time series. An issue that arises is how this data is analysed and interpreted, given that the patient should have access rights to their own information. ...

8.   OUTLINE OF RESEARCH APPROACH

TASK
Prepare a report (around 3 pages) that identifies a research problem (linked to your literature review) and highlights the contributions you intend to make in your research area. Outline how you plan to evaluate your contributions. You should provide enough details to show that you have thought about how to convince readers. For example, if you intend to measure performance, you should describe what aspects will be measured, and what you will compare the measurements to.

WRITING THE INTRODUCTION TO THE OUTLINE OF RESEARCH APPROACH

Activity 4
Identify the stages in the introduction. The possible stages are: 1. Orientation to the topic; 2. Introduction to key authors, issues AND importance of topic; 3. Gap; 4. Aim / Research Question; 5. Outline or Methods.

Topic area: Visual analytics for bettering the evaluation and care of health	Stages
With the immense expansion of digital medical data, there is also much growth in the area surrounding visual analytics, human computer interaction and medical informatics. While many methods of data representation and processing for decision making have been researched and experimented with (see for example …) , a gap exists where the two fields of medical informatics and sense-making overlap. Visual analytics provide an opportunity to improve the state of healthcare … so there is a need for analysing different visualisation techniques to determine the best methods to most efficiently represent data that provide insights to strengths and weaknesses in a national medical system. …	

9.   WRITING GAP AND AIM STATEMENTS

Activity 5:
Draft gap and aim statements for your research outline/proposal

10. EVALUATING THE PROPOSAL: A CHECKLIST

The following list shows the criteria that the reviewer looks for in proposals. It would be useful to keep those criteria in mind as you are writing your proposal to focus on the relevant criteria.

Introduction

1. Problem is significant and clearly stated.

2. Limitations and delimitations of the study are stated.

3. Delimitations are well defined and appropriate to solutions of the problem.

4. Assumptions are clearly stated and are tenable.

Aims

5. Specific aims or questions to be studied are clearly stated.

6. Hypotheses, or research questions are clearly stated.

7. Hypotheses, or research questions are testable, discoverable or answerable.

Literature

8. (Short) Literature Review of literature is themed and critical.

9. Hypotheses /aims / research questions derive from the (short) Literature Review.

10. Relationship of study to previous research is clear.

Methods

11. Procedures are described in detail.

12. Procedures are appropriate for the solution of the problem (justification).

13. Variables are controlled.

14. Validity and reliability of data gathering are explained.

15. Appropriate methods are used to analyse data.

Writing

16. Title is clear and concise.

17. Chapter, section, paragraph, sentence are well structured and clearly written

18. Tone is unbiased and impartial.

19. Grammar, punctuation and spelling are correct.

20. Minimum of typographical errors. (After Mauch and Birch, 1989: 91-93).

10. USEFUL RESOURCES

Workshops and online resources are available for all students on the LH Canvas site
https://canvas.sydney.edu.au/enroll/FP7447