



Systematic Approaches to Literature Reviewing

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Adapted from presentation by Dr. Derek Richards & Dr Mark Mathews



Workshop Overview

- ✓ Explain elements of the systematic review process



Challenges in Conducting Literature Reviews

- Knowing where to start, (e.g. wide then narrow, or narrow then wide?)
- Knowing what to include
- Knowing when to stop literature searching
- Knowing how far to venture into the literature of associated domains



What is a Systematic Literature Review?



Systematic Reviews

A review of a **clearly formulated question** that uses **systematic and explicit methods** to identify, select and **critically appraise relevant research.**

from www.sebc.bangor.ac.uk



Systematic Reviews

Readers need to be able to judge whether all of the **relevant literature** is likely to have been found, and how the **quality of studies** was assessed.



Key features

The systematic review process:

- **Explicit** and **transparent** methods
- A **standard** set of stages
- **Accountable, replicable** and **updateable**



To summarise ...

You need:

- 1. A clearly formulated question
- 2. Systematic and explicit methods
- 3. Critical appraisal of relevant research



1. Formulating a Problem

A Research Question should be:

- Specific
- Focused
- Clearly formulated
 - Well defined

Ask questions of the question!



1. Formulating a Question - Discuss following questions in pairs/threes

1. Why are social networking sites harmful?
2. How are online users experiencing or addressing privacy issues on such social networking sites as MySpace and Facebook?
3. What is the effect on the environment from global warming?
4. How is glacial melting affecting penguins in Antarctica?

SLD Research Question Examples

Why are social networking sites harmful?

- ❑ Doesn't specify which social networking sites
- ❑ What kind of harm the sites are causing.
- ❑ Assumes that this "harm" is proven and/or accepted.

- <http://writingcenter.gmu.edu/?p=307>
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SLD Research Question Examples

How are online users experiencing or addressing privacy issues on such social networking sites as MySpace and Facebook?

- ❑ Specifies sites (MySpace and Facebook),
- ❑ Type of harm (privacy issues)
- ❑ Who the issue is harming (users).

<http://writingcenter.gmu.edu/?p=307>

SLD

- A strong research question should never leave room for ambiguity or interpretation.
-

SLD Research Questions Examples

What is the effect on the environment from global warming?

So broad that it couldn't be adequately answered in a book-length piece, let alone a standard college-level paper.

SLD Research Question Examples

How is glacial melting affecting penguins in Antarctica?

- ❑ narrows down to a specific cause (glacial melting),
 - ❑ a specific place (Antarctica)
 - ❑ a specific group that is affected (penguins).
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- <http://writingcenter.gmu.edu/?p=307>
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- When in doubt, make a research question as narrow and focused as possible

- <http://writingcenter.gmu.edu/?p=307>
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1. Formulating a Problem

What is your **research question**?

Take a few moments to write down your research question.



1. Formulating a Problem

Is Your Research Question:

- Specific?
- Focused?
- Clearly formulated?
 - Well defined?

Ask questions of your question!

SLD

- Exercise to do in pairs:

Take five minutes each to discuss your research topic. Ask your partner to interrogate your question to see if it meets all the criteria mentioned earlier

Online students can take the time to objectively interrogate their own question.



1. Formulate question

Computer-based psychological treatments for
depression:

A systematic review



2. Locating and Finding Studies





2. Locating and Finding Studies

- Phase 1 – Identifying the Research
- Phase 2 - Selection





Phase 1- Identify the Research

a broad but defined, systematic sweep

1. Defined search terms
2. Defined search arena
3. Other broad search limits, e.g. language, date,

TIPS!

Document the search protocol and record what research was found

Systematically manage the search output, e.g. using endnote



Phase 1- Identify the Research

1. Defined search terms

- Online self-help treatment for depression,
- Web-based intervention for depression,
- Online depression treatments,
- Computerized (+Computerised) cognitive behaviour therapy for depression,
- Internet (+delivered) treatment for depression.



Phase 1- Identify the Research

2. Defined search arena

- ❖ Databases
 - ❖ citation indices
 - ❖ reference lists from primary and review articles
 - ❖ grey literature
 - ❖ conference proceedings
 - ❖ research registers
 - ❖ the internet
 - ❖ individual researchers/practitioners
-
- A search of three databases (EMBASE, PubMed, and PsychINFO including PsychARTICLES)



Phase 1- Identify the Research

3. Other broad search limits, e.g. language, date:

- Studies published in English in peer-reviewed journals in the last 10 years (March 2001–March 2011)
- The authors decided that the years represented a meaningful timeframe in terms of:
 - contemporary technologies
 - advances in multimedia
 - broadband developments



Phase 2 – Selection

Inclusion and Exclusion Criteria - related to your research question

Develop inclusion or exclusion statements, these might relate to study outcomes, research design, methods used, population worked with etc.

e.g.

- studies with a mixed population of men and women,
- only random control trials,
- maximum exposure time of 10mins



Phase 2 – Selection

Inclusion and Exclusion Criteria - related to your research question

- Included studies using a variety of different computer-based technologies
- Study participants had to be adults (18+years) with depression (self-report or diagnosis), established using valid and reliable measures
- Studies included were published in peer reviewed journals in English in the last 10 years
- Participants could be from the general population or a clinical group so long as depression was specifically measured.
- Preliminary research into recent developments in computerized paradigms for depression such as cognitive bias modification (CBM) based interventions were not considered for inclusion



3. Critical appraisal of studies

“Assessing the quality of methodology is a critical part of the systematic review process”

You will need to make decisions on all aspects of the review and simply justify what you decide, making sure its credible and meets the criteria, that it is transparent, replicable and updateable.

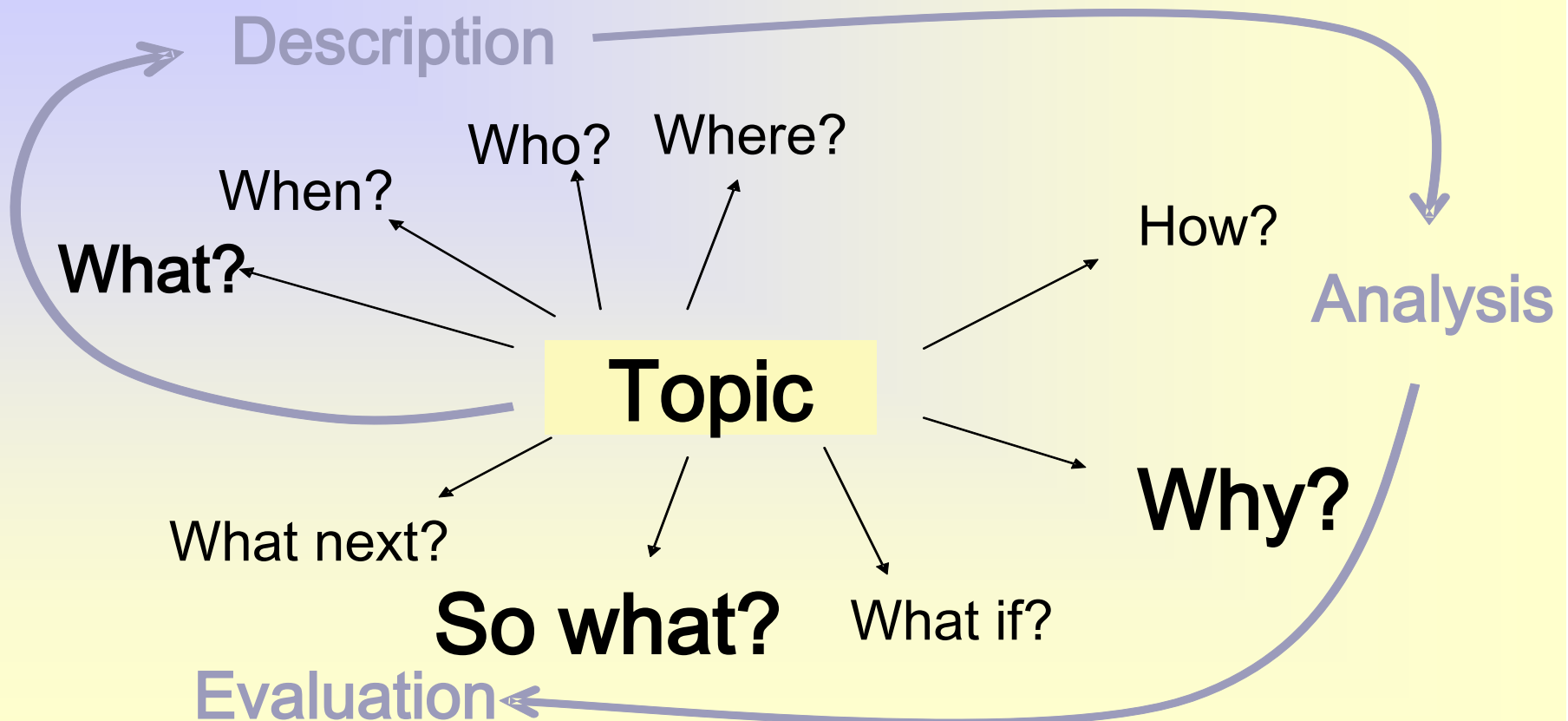


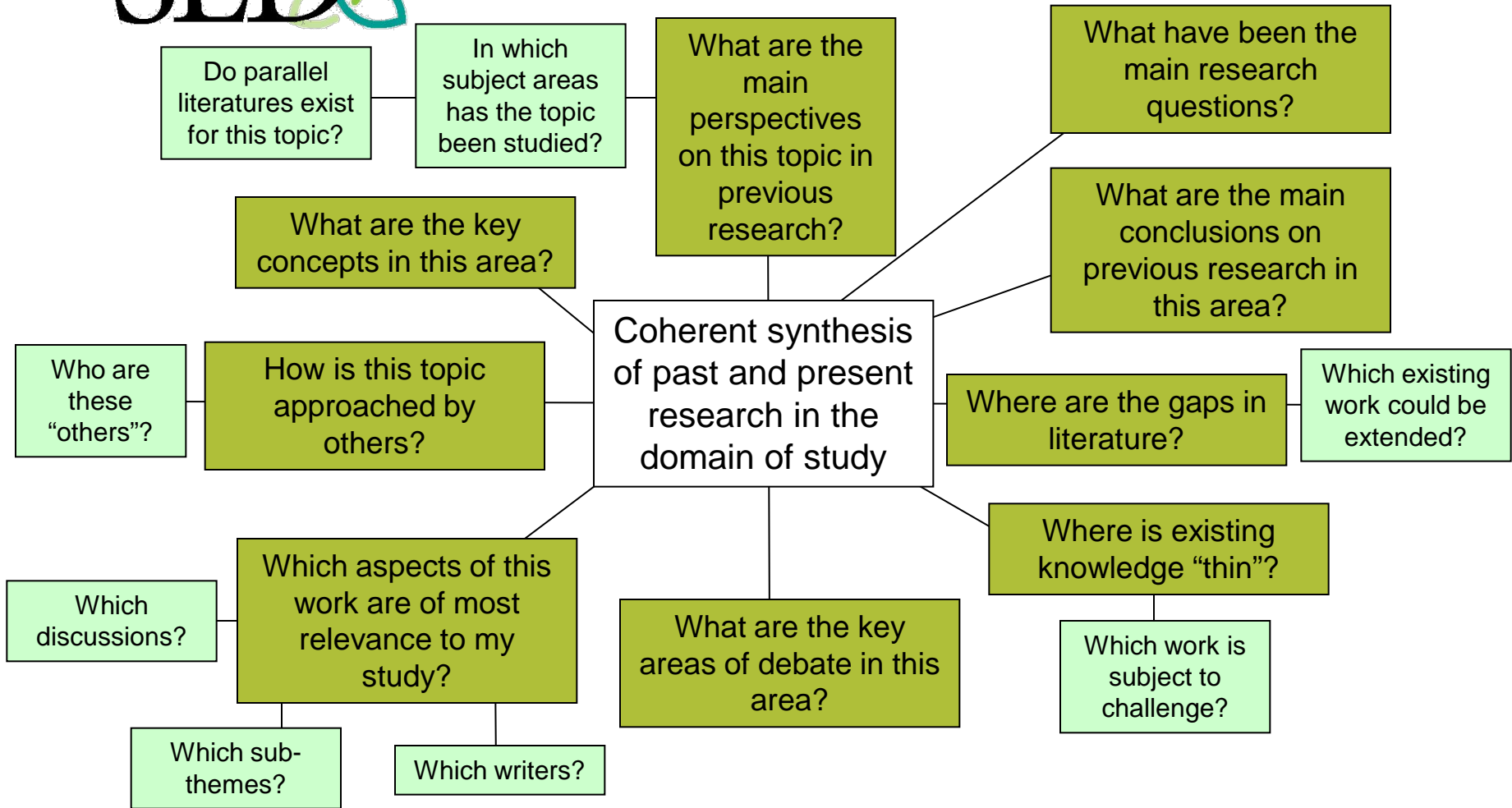
3. Critical appraisal of studies

Computer-based psychological treatments for depression:

- Programs and their content
- Methodological characteristics
 - Objectives of the studies
 - Recruitment, sample types and sizes
 - Eligibility criteria employed
 - Outcome measures used
- Support type and communication mode in the studies
- Outcomes, support types and dropout
- Satisfaction
- Limitations

Model to Generate Critical Thinking







Write up literature review - Structure

Background

Purpose/Research question

Method

Findings

Discussion

Implications/Recommendations



Other ideas and options

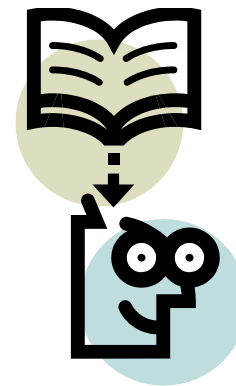
Speed reading

Endnote

Databases in my area

Data mining techniques

Recording





SR websites

Centre for Evidence-based Conservation -<http://www.cebc.bangor.ac.uk/>

Centre for Reviews and Dissemination (medical) -<http://www.york.ac.uk/inst/crd/index.htm>

Cochrane Collaboration (international- medical) -<http://www.cochrane.org/>

EPPI-Centre, Institute of Education - <http://eppi.ioe.ac.uk/cms/>

Social Policy and Social Care -<http://www.york.ac.uk/inst/chp/srspsc/index.htm>

If you read one article, an example here of a review of the ways studies in reviews are appraised - <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=521688>

If you prefer power-point, how about this one on mixed method reviews
<http://www.ccsr.ac.uk/methods/events/challenges/documents/JamesThomasESRCMethodologicalchallenges.ppt>