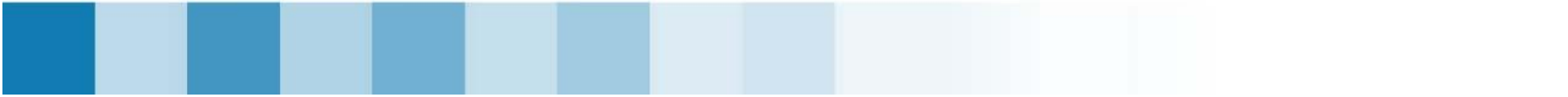# Research Methodology

Literature Review

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Acknowledgement

The slides are taken (and adopted) from a lecture by Professor Alemayehu Molla.

Outline

- What is a literature?
- Literature review process
- Writing a literature review
- Literature analysis
- Citing and referencing
- Journal ranking and impact

Course Learning Outcome

- "Draw on the literature in the field, analyse and interpret research evidence published on a topic to establish a suitable research problem/issue or opportunity to explore further" (Course Guide)

What is a literature?

The literature in the context of research is all sources of published data on a particular topic. It is research that has already been carried out and published in

- Journal articles
- Monographs
- Computerized databases
- Conferences proceedings
- Dissertations
- Empirical studies
- Government reports and reports from other bodies
- Historical records
- Statistical handbooks

- **Primary sources**: a direct record of observations or findings written by the observer
- **Secondary sources:** normally written after the event
- **Tertiary sources**: use and distil information from primary and secondary sources
  - Sources of publications on databases, handbooks, standards, encyclopaedia

Source: https://tinyurl.com/stuu55y

Literature and research process

Defining research problem	Background reading for your own learning using a broad array of sources. Explain how your research fits into the bigger picture
Articulate rationale	To put the significance of the research in a broader context. Convince the reader that the research area is significant (important). Why did I think that doing research in this general area would be interesting and important?
Develop significance and innovativeness	In-depth engagement to offer a critical appraisal of studies that have been conducted to address the research problem.
Research design	To inform your study with theory or the need for one. Convince the reader that the research design is apt for the project. Why the approach you chose is the best?
Method design	To inform your choice of method and justify appropriateness
Contribution and discussion	To place the contribution that a study is making in the context of the literature domain that it draws up on.

Exercise

"If you can't say anything peer reviewed about your work, don't say anything at all."

Source: https://tinyurl.com/vsvhx5g

- What is the difference between peer-reviewed vs. non peer-reviewed literature?
- How do you establish the quality of a literature?
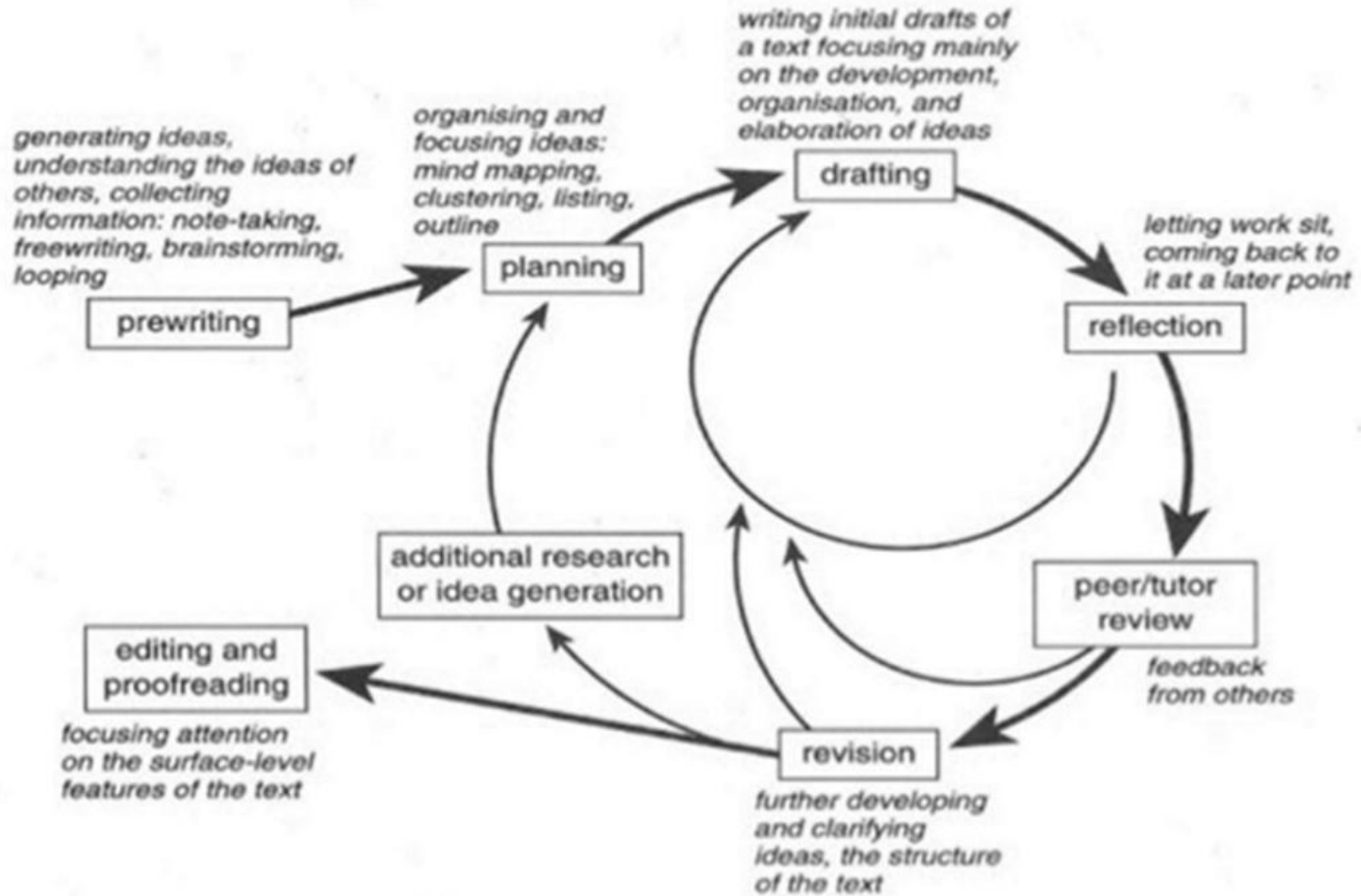
Literature review

Source: https://tinyurl.com/w256orx

- The literature review is 'a systemic process with a view to identifying the existing body of knowledge on a particular topic' (Collis and Hussey, 2009, p. 91)

- It is a synthesis of available resources and materials with strong relation to the topic in question, accompanied by a synthesis, critical evaluation and comparative analysis of current knowledge on a topic, substantive findings, theoretical and methodological contributions.
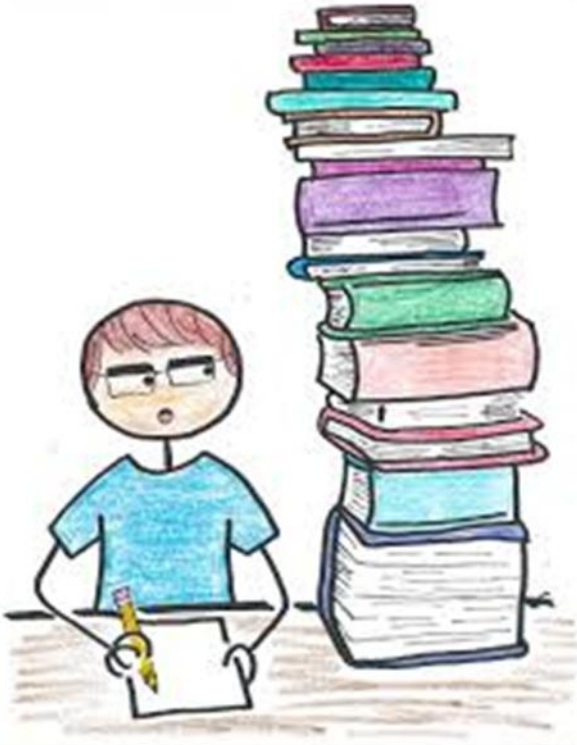
Undertaking a Literature Review

- Questions you need to ask yourself when you are planning and drafting your Literature Review:
  - What has been done in your field of research?
  - What principles of selection are you going to use?
  - How are you going to order your discussion? Chronological, thematic, conceptual, methodological, or a combination? What section headings will you use?
  - How do the various studies relate to each other? What precise contribution do they make to the field? What are their limitations?
  - How does your own research fit into what has already been done?
  - Could the problem have been approached more effectively from another perspective?

Literature Review Process

generating ideas, understanding the ideas of others, collecting information: note-taking, freewriting, brainstorming, looping

prewriting

organising and focusing ideas: mind mapping, clustering, listing, outline

planning

writing initial drafts of a text focusing mainly on the development, organisation, and elaboration of ideas

drafting

letting work sit, coming back to it at a later point

reflection

peer/tutor review

feedback from others

additional research or idea generation

editing and proofreading

focusing attention on the surface-level features of the text

revision

further developing and clarifying ideas, the structure of the text

Undertaking a Literature Review

Source: https://tinyurl.com/w256orx

- Iteratively
  - Decide the purpose of the literature review
  - Identify, locate and retrieve
  - Ensure quality and relevance
  - Develop annotated bibliography
  - Summarise, analyse, synthesise
  - Writing

Undertaking a Literature Review: Decide purpose & topic

- A literature review is purposeful which means the researcher must establish a topic or theme, however defined, so that the researcher knows the direction the research has to follow.

- Without a topic, theme or area of interest, it is difficult to direct efforts towards a particular area and gather literature.

Undertaking a Literature Review: Decide purpose & topic

Characteristics	Consideration
Position	An essay; a section in an article, a proposal ; a chapter in a PhD, MSc; an article for publication
Focus	Research outcomes, methods, theories, practices or applications
Goal	Integration (generalization, conflict resolution); criticism; identification of central issues
Perspective	Neutral representation; espousal of position
Audience	Specialized scholars , general scholars, practitioners or policy makers, general public
Coverage	Exhaustive, exhaustive with selective citation, representative, central or pivotal
Organisation	Chronological, thematic, conceptual, methodological

Undertaking a Literature Review: Identify, locate and retrieve

- Defining keywords or short phrases that describe aspects of the topic
- Sources and tools available
    - Web-based e.g. Google Scholar (note limits)
    - Web of knowledge (Web of Science) (note limits)
    - Subject specific databases
    - Academic networks (note limits)
    - Institutional repositories (Inter-governmental, governmental, organisational, professional/industry associations)
    - Personal, Supervisor
    - Using citation and reference lists of those who have gone before you
- Coverage
    - Type of material,
    - Geographical context/focus
    - Time period
    - Language

Undertaking a Literature Review: Identify, locate and retrieve

- Build your bibliography and article database

- Copying citations incorrectly, or incompletely, is problematic to relocate the source.

- Master Endnote and keep a correct Endnote entry from day one, every time, for all articles

- Use reference managers
  - Example: JabRef

Exercise

- Identify at most three-five articles that you are building on in your PhD/MSc project.

- Why did you choose these articles? How do you intend to build on them

- Identify at most three-five articles that you are challenging. Why did you choose these articles. In what ways are you challenging these articles?

Source: https://tinyurl.com/vu7kqth

Undertaking a Literature Review: Quality and relevance

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BLOG

www.communicatescience.eu

EL.2011

"I've looked at all the data I could find, PEER REVIEW is old-hat, according to this blog!"

- Literature overload
- A common mistake in undertaking the review is to collect everything that you have identified regardless of its relevance.

- Develop the habit of screening the literature for quality and relevance
- Think of the review as a funnel - start wide with the overview and then quickly narrow into discussing the research that relates to your specific topic.

- Be critical and demonstrate quality and relevance to your research.

Source: https://tinyurl.com/t4sh4ex

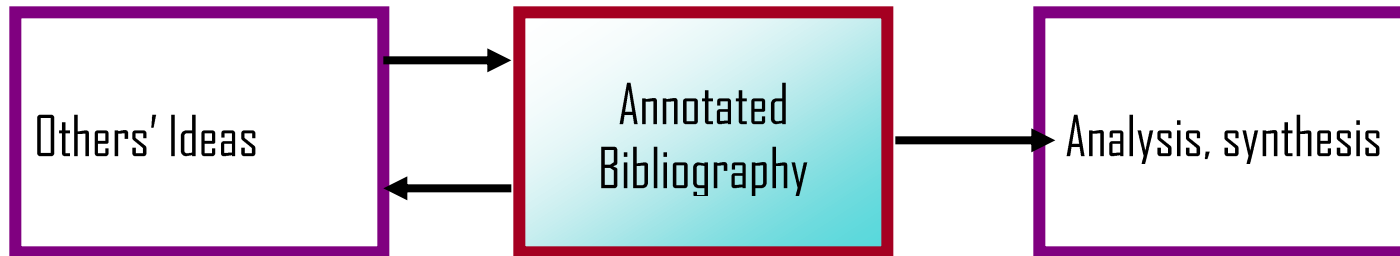# Undertaking a Literature Review: Quality and relevance

- How relevant is the literature to the research?

- How dated is the literature sourced?

  - If dated, is it from seminal sources?

- Is there any up to date literature ?

- Who authored the literature?

  - What qualifications do they have?

  - Do they have other publications?

- Take a critical perspective to published research

Undertaking a Literature Review: Develop annotated bibliography
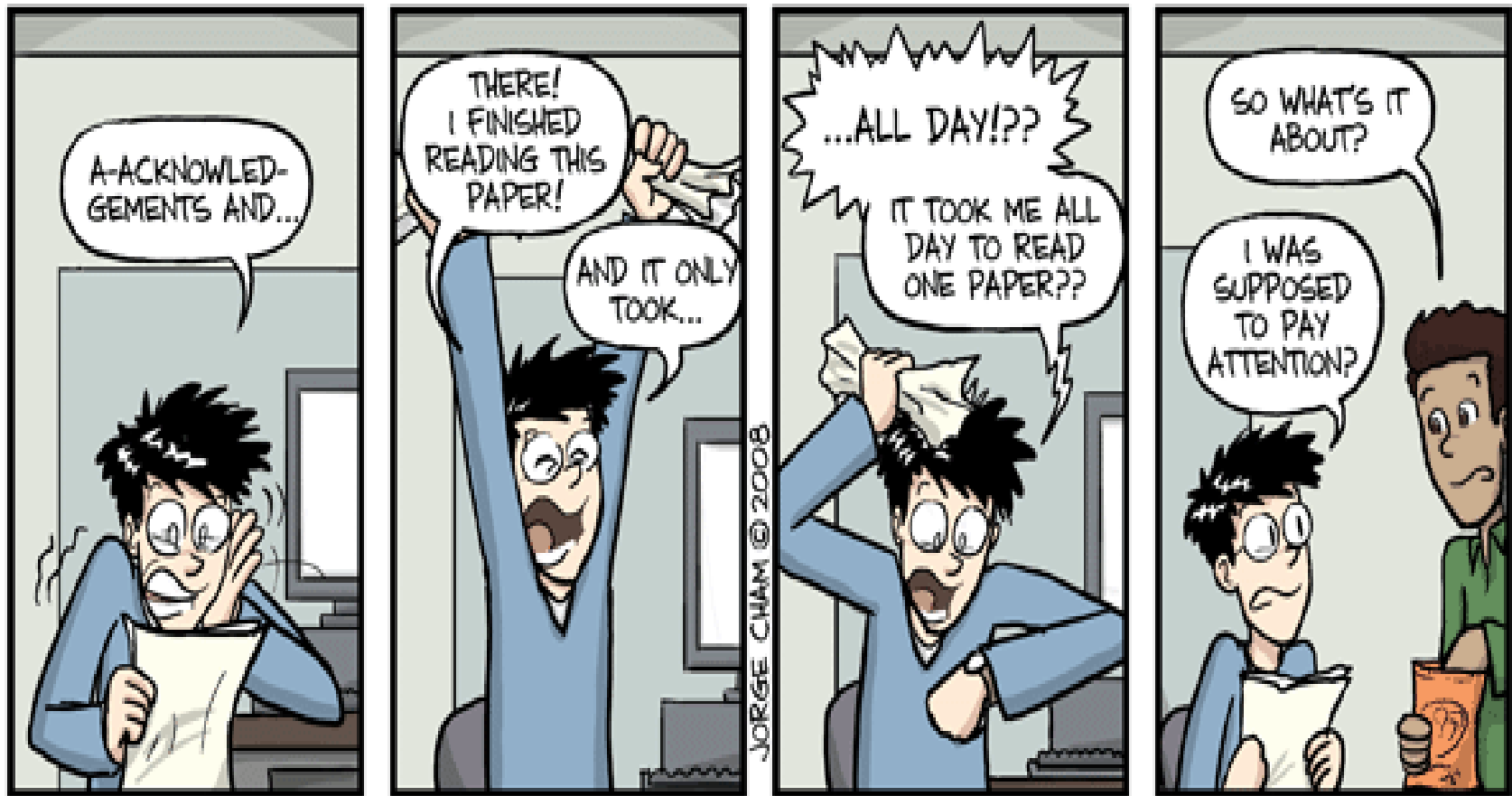
WWW.PHDCOMICS.COM

Undertaking a Literature Review: Develop annotated bibliography

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┌──────────────┐        ┌──────────────┐        ┌──────────────────┐
│              │  ───▶  │   Annotated  │  ───▶  │ Analysis,        │
│ Others' Ideas│        │  Bibliography│        │ synthesis        │
│              │  ◀───  │              │        │                  │
└──────────────┘        └──────────────┘        └──────────────────┘
```

The annotated bibliography is essentially a flat file (list document) of your notes from your reading.

Each entry consists of (1) the citation, (2) your evaluation of the value of the article, and (3) some idea of how the article fits into your problem statement or thinking.
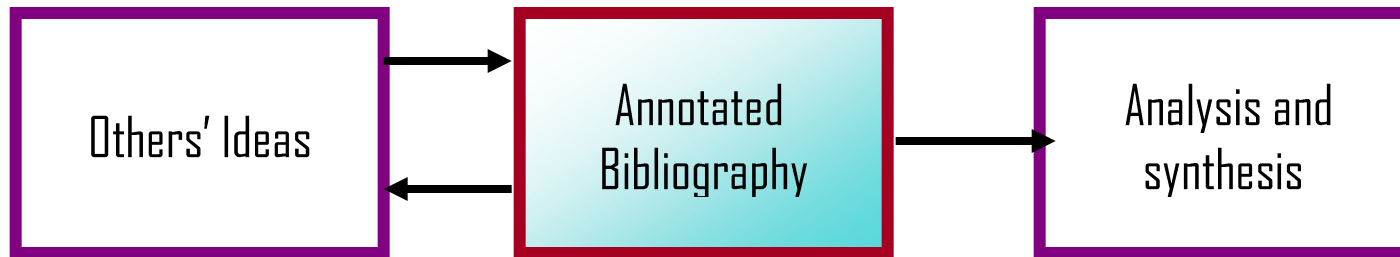
Undertaking a Literature Review: Develop annotated bibliography

Citation	RQ	Theory	Sample	Method	Findings	Conclusion

Undertaking a Literature Review: Develop annotated bibliography

- An annotation may contain all or part of the following elements.
    - Provide the full bibliographic citation
    - Indicate the background of the author(s)
    - Indicate the content or scope of the text
    - Outline the main argument
    - Indicate the intended audience
    - Identify the research methods (if applicable)
    - Identify any conclusions made by the author/s
    - Highlight any special features of the text that were unique or helpful (charts, graphs etc.)
    - Discuss the relevance or usefulness of the text to research
    - Point out in what way the text relates to themes or concepts in your thesis
    - State the strengths and limitations of the text

Undertaking a Literature Review: Summarise, analyse, synthesise

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│              │ ──→  │              │ ──→  │ Analysis and │
│ Others' Ideas│      │  Annotated   │      │  synthesis   │
│              │ ←──  │ Bibliography │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
```

Unlike the Annotated Bibliography, to analyse and synthesise

- You will have read in detail a selected pool of literature

- Everything in the pool is placed into some argument thread leading to some conclusion

- You will therefore remove extraneous entries, but will expand review of individual articles to include your evaluations, some history, influence on other thinking, etc.

- A comparative framework expands on the literature survey and develops a systematic way of comparing articles, usually based on research issues and usually around a table of some sort. This makes it easy to compare articles and sort them by importance or relevance

Undertaking a Literature Review: Summarise, analyse, synthesise

- A strong literature review examines each work on its own and in relation to other works by
    - identifying and then analysing them with regards to a number of different research aspects and ideas
    - Here are some possible categories to use for comparison and analysis
        - topic
        - argument
        - results found and conclusions
        - methods
        - theoretical approach

Undertaking a Literature Review: Summarise, analyse, synthesise

- Have you read the most important experts in your field?
- Have you referred to major research studies which have made contribution to knowledge in your field?
- Have you referred to articles in the most important academic journals in your area?
- Have you identified any major government or other institutional study in your research field?
- Have you identified studies that use the same paradigms and methodologies you propose?
- Have you identified serious criticisms of any previous studies?
- Have you avoided plagiarism?

Writing Literature Review

- In writing the literature review, your purpose is
  - to convey to your reader what knowledge and ideas have been established on a topic, their strengths and weaknesses
  - Show your reader that you...
    - have a clear understanding of the key concepts/ideas/studies/ models related to your topic
    - know about the history of your research area
    - Identify any related controversies that can discuss these ideas in a context appropriate for your own investigation
    - can evaluate the work of others
    - formulate and justify questions that need further research

Writing Literature Review

- Organize the literature review into sections that present themes or identify trends, including relevant theory.

- It is not a list describing or summarizing one piece of literature after another. It's usually a bad sign to see every paragraph beginning with the name of a researcher.

- In the case of a voluminous body of literature

  - *"The technical literature of price adjusted accounting is very extensive. This is evidenced by the literature search and critical analysis published by Dellaportas (2012), which cited over 250 references in the literature published up to 2010. An exhaustive review of the literature is thus beyond the scope of this work."*

Writing Literature Review

- To add clarity where none exists

  "The conception of ... this section provides a clearer understanding of the different research methodologies..."

- Linking multiple streams of literature

  "There are two schools of thought on ...... The first school of thought examines.... The second school of thought examines..."

Writing Literature Review: Tips for guiding the reader

- Reader directions are comments in the text:
    - they give signals to the reader about where the author is going and what they have achieved so far.

- This can apply to:
    - The whole thesis (*the focus of this thesis is...*)
    - Another chapter (*the physical properties are presented and analysed in Chapter 5*)
    - The current chapter (*the rest of this chapter will examine...*)
    - Another section (*in the previous section, it was demonstrated...*)
    - The current section (*the following case study will illuminate...*)

Writing Literature Review: Paraphrase or quotation?

- Generally, you should **aim to write your own story and analysis.** Rarely is the original text written with your particular focus in mind.

- Direct quotations are commonly used to highlight:
  - definitions of important terms
  - assumptions underlying the author's choice of words
  - particularly well-expressed opinions, revealing insights which a paraphrase could not capture

Writing Literature Review: Paraphrase or quotation?

- When you use direct quotation, it needs to fit grammatically with the rest of your sentence.

  - *Regulatory agencies have been known to take a hard line against "corporate transgressors who care nothing for the helpless investor" (Dellaportas, 2017)*

- To modify a quote, you use square brackets [like this] to include a verb or to change a pronoun to make it follow grammatically.

- Omitted information from a quote is indicated by '[…]'.

Writing Literature Review :Tone

- Tone
  - "A successful literature review constructively informs the reader about what has been learned."
  - In contrast to specific and critical reviews of individual papers, tell the reader what patterns you are seeing in the literature"
  - Do not be overly negative
  - Give due respect to the work of previous scholars

Webster and Watson, 2002, p XVIII

Writing Literature Review: Tense

- The present tense is used for:
  - a generalisation - in overviews, statements of main points, or a generally accepted scientific fact
  - **Example**:
    - "This thesis **investigates** the second approach."

- The past tense is used to:
  - describe the contents, findings, or conclusions of past research. It emphasises the completed nature of a past activity.
  - **Example**:
    - "This model of price adjusted accounting **was** popular in the 1970s."

Writing Literature Review: Tense

- The present perfect tense is used to:
  - indicate that research in the area is still continuing, or that the research has immediate relevance today
    - **Example 1**: " *Several researchers* **have studied** *…*"
  - generalise about past literature
    - **Example**: " *Software* **has been tested** *manually for most of the last four decades.*"

- Tenses can indicate more than chronology.

  - **past tense** in reporting others' research indicate secondary importance to current work

  - **present tense** to indicate that the research is of more direct and primary importance

Writing Literature Review: The *I* vs *We* debate

- Take your cues from the way this is done in published articles in your field.

- *"I"* or " *we*" is commonly found in mathematical writing, but not in social science

- *Avoid writing in the first person, this detracts from the objectivity of scholarship.*
  - "I think..." or "It is my opinion..."

- Referring to yourself as " *the author*", "*the present writer*", or "*the researcher*" is awkward. Try:
  - *The following discussion is based on* the work in Author (Year).
  - *From the above discussion, it is clear that* the ......

Writing Literature Review: Common faults when writing literature review

- Making assertions without stating where the evidence was obtained
    - You must support all claims to avoid plagiarism
- Failing to state the objectives of previous studies, the year conducted, location, sample, methodology
- A 'shopping list' with no effort to synthesise or compare previous studies, or provide rationale
- Poor structure, style or spelling
- Conclusions fail to provide rationale for the proposed study or lead to the research questions

Exercise

- Develop a list of keywords for your topic

- What concepts do you need to define in your topic? Whose definition are you using? Why?

- What data do you need to justify the significance of your research problem? Which sources do you use, why?

Citation and Referencing

- A citation is 'an acknowledgement in the text of the original source from which information was obtained' (Collis and Hussey, 2009, p. 96)

- Acknowledgement is made by citing the author's surname and the date of the publication in brackets
  - e.g. Richardson et al,. (2015)

- If the author's words are quoted or you reproduce a table, chart, diagram, photograph, or other image, you must also include the page number from which it was taken
  - e.g. Richardson et al., (2015, p, 30)

- Note
  - In some areas, authors use numbers to cite the original source.

Citation and Referencing

- Citing the work of other authors, may focus either on the:
  - *information* provided by that author, or
  - on the *author* himself/herself

- To emphasize the **information**
  - …The availability of data is a key factor in determining the successful outcome of a research project (Collis and Hussey, 2009).
  - …For price adjusted accounting, the time-dependent stresses on data availability is important (Dellaportas, 2017)

Citation and Referencing

- To emphasize the **authority**, the author's name is emphasised

  - ...Collis and Hussey (2009) argue that the availability of data is a key factor in determining the successful outcome of a research project.

  - ...Author (2017) developed a simplified theory

  - **...**Several authors have suggested that price adjusted accounting is beneficial (Author 1, 2001; Author 2, 2009; Author 3, 2017).

Citation and Referencing

- Universities treat plagiarism as academic misconduct, Saunders, Lewis and Thornhill (2007) also warn of the associated penalties.

- Collis and Hussey (2009, p. 103) define plagiarism as
  - 'the act of taking someone's words, ideas or other information and passing them off as your own because you fail to acknowledge the original source'.

- They describe it as a form of intellectual theft.

Citation and Referencing

- Plagiarism means taking the ideas or words from other writers without acknowledging them. Along with fabricating results, it is considered an academic sin!

- *When you submit your thesis you must be very confident that all sources are acknowledged*; hence the Declaration Statement.

Citation and Referencing

- References are 'a list containing bibliographic details of the sources cited in the text' (Collis and Hussey, 2009, p. 96) shown in alphabetical order by author's surname at the end of the document

- The format depends on the referencing guide that is applicable to a given piece of work

- Complete referencing is a sign of quality

Checklist for referencing

- Have I acknowledged other people's work, ideas and all sources of secondary data?

- Have I enclosed quotations in quotation marks and cited the author(s), date and page number in the original source?

- Have I acknowledged the source of all tables, diagrams and other items reproduced, including the number of the page in the original source?

- Have I applied the rules consistently?

- Have I included full bibliographic details for every source cited in my list of references?

Exercise

- Identify the seminal literature in your topic. Why do you consider them to be seminal? How does your research position within this seminal literature?

- What are the latest articles in your chosen topic? How do you differentiate what you intend to do from these literature?

Research Impact

- Research impact is increasingly important in assessing research quality.

  1. Article Citation Count
  2. Journal Impact Factor
  3. Journal Ranking Lists

- See: http://rmit.libguides.com/researchimpact

Article Citation Count

- Demonstrate the impact of an article by the number of times it has been cited since it was published (citing references)
  - Scopus (Elsevier) Multidisciplinary abstract and citation database indexing 18,000+ peer-reviewed journals, conference proceedings, book series and patents. It allows cited reference searching from 1996.
  - Web of Science (ISI) A multidisciplinary citation index of leading peer-reviewed journals, conference papers and some books.
  - Google Scholar Google Scholar searches a wide range of scholarly publications from university, government and academic publisher sites.
    - All citing references in Google Scholar should be checked, as their reliability varies.

- As no single database will contain complete information on who has cited a particular work, it is advisable to use multiple sources

Journal Impact Factor

- Measures the relative ranking of a journal within a particular field.
- Identifies prestigious and influential journals in a particular discipline
    - CiteScore Based on Scopus, this is a set of metrics that measure a scholarly journal's impact by looking at the average number of citations per item it receives over the preceding three-year period.
    - SJR - SCImago Journal & Country Rank Based on Scopus, provides a prestige metric based on the subject, quality and reputation of citing journals.
    - Scopus Journal Analyzer Allows you to select up to 10 journals in a specific field. The results are uploaded into graphs, making it easy to see how journals are performing relative to each other.
    - Eigenfactor.org The Eigenfactor™ Score uses citation data to assess the relative influence of journals.
    - Google Scholar Metrics Provides a browsable list of the top 100 journals indexed in Google Scholar, with titles ordered by their five-year h-index and h-median metrics.

Ranked journals lists

- [European Reference Index for the Humanities revised lists 2011](#) Journals ranked by expert panels in 15 sub-disciplines in the humanities. Disciplines include art and art history, linguistics, pedagogical and educational research and psychology.

- [Journal Quality List](#) Journal rankings from a variety of sources in the broad areas of economics, finance, accounting, management and marketing. The list is intended to assist academics to target papers at journals rather than for researcher evaluation.

- [Association of Business Schools Academic Journal Quality Guide](#) A British guide to the relative quality of journals in which business and management academics might publish the results of their research.

- [Australian Political Studies Association (APSA)](#) Updated preferred journal rankings for the 1606 and 1605 FOR codes by APSA

- [Australian Business Deans Council (ABDC) Journal list](#) A journal quality list ranking journals in 15 sub-disciplines in business, economics and law. It is also incorporated into the Journal Quality List (above)

Ranked journals lists

- Journal ranking lists assess research quality using a combination of indicators and expert review by committees comprising experienced, internationally-recognised experts.

- Excellence Research in Australia (ERA) 2012 included discipline-specific ranked lists of journals and conferences.
    - These lists are **not current** and according to the ARC "**The rankings should not be used to make assessments about the quality of journals or conferences today**".
    - http://lamp.infosys.deakin.edu.au/era/

- Australian Business Deans Council List
    - Revised in 2016 and widely used
    - http://www.abdc.edu.au/

Researcher measures: h-index

- The h-index measures the impact and productivity of an individual researcher.

- It identifies the highest number of papers from an individual's publication list to have the same or a higher number of citations.

  - If a researcher has an h-index of 5 then they have at least 5 publications with 5 or more citations.

- Both Scopus, Web of Science and Google Scholar Citations include h-index information. A researcher's h-index is likely to vary, depending on the database used to calculate it.

Predatory publications

- DO NOT Publish in Predatory journals
- Some open access publishers have created a market for predatory publishers, who are happy to publish your paper for a fee, and will run no quality control process.

Summary

- A critical review of literature develops an understanding of previous research and relates to your research question/objectives

- Your literature review will critically discuss and reference work that has been already undertaken
  - Key points drawn from the critical review will be presented in a logically argued way highlighting fresh insights

- No one correct structure for a critical review of literature
  - Funnel – start with a more general discussion and then narrow it down

Summary cont…

- Literature sources can be
  - Primary, secondary and tertiary or overlap
- When planning literature review
  - Have clearly defined research topic
  - Define the parameters of your research
  - Generate keywords and search items
  - Discuss your ideas as widely as possible
    - Techniques – relevance trees, mind maps, morphological analysis
- Care is to be taken when writing literature reviews not to plagiarise other people's work

Summary

- In general, the literature review should:
  - provide a context for the research
  - justify the research
  - ensure the research hasn't been done before (or if it is repeated, that it is marked as a "replication study")
  - show where the research fits into the existing body of knowledge
  - enable the researcher to learn from previous theory on the subject
  - illustrate how the subject has been studied previously
  - highlight flaws in previous research
  - outline gaps in previous research
  - show that the work is adding to the understanding and knowledge of the field
  - help refine, refocus or even change the topic

Consider publishing your literature

- Consider converting your literature review into an academic paper and publish in a relevant journal
- Literature review papers that summarise the literature are rarely published. Consider developing papers that:
  - give clarity to a murky or emerging areas of research area
  - construct theoretical frameworks
  - calls for changes in research direction due to limitations of existing research or frameworks

- Guides from
  - Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human resource development review*, *4*(3), 356-367.
  - Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS quarterly*, xiii-xxiii.

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