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Guidelines for Writing a Literature Review

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Guidelines for writing a literature review

THE SKILLS OF SCIENTIFIC RESEARCH-9

OCTOBER, 2016

Lecture outline

Definitions

What is a literature review?

Use/Purpose?

Components

Literature Assessment

What should I do before writing the literature review?

Begin composing

Conclusions

Definitions

Literature

lit·er·a·ture:

The body of written work produced by scholars or researchers in a given field

Review

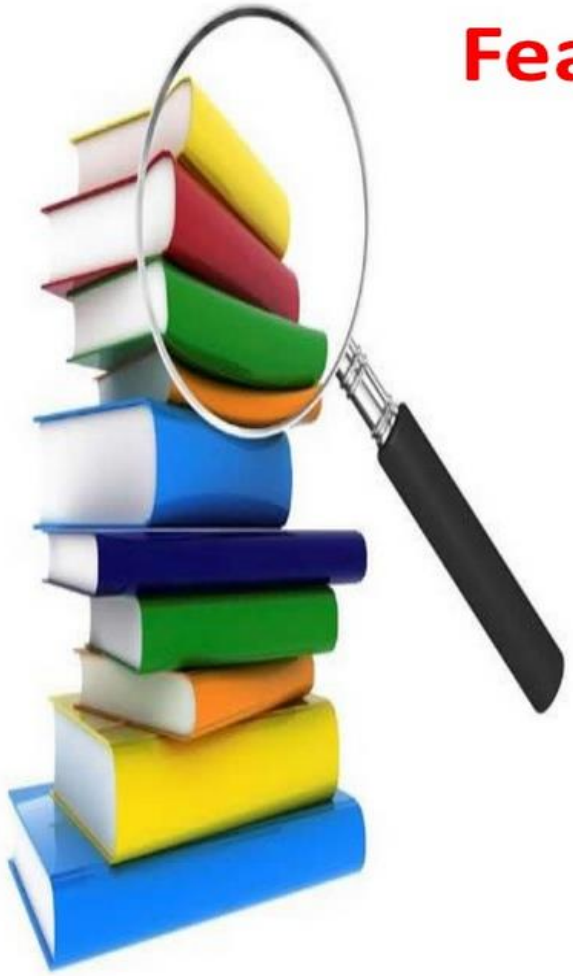
1. To look over, study, or examine again.

2. To consider retrospectively; look back on.

3. To examine with an eye to criticism or correction

Where is it located?

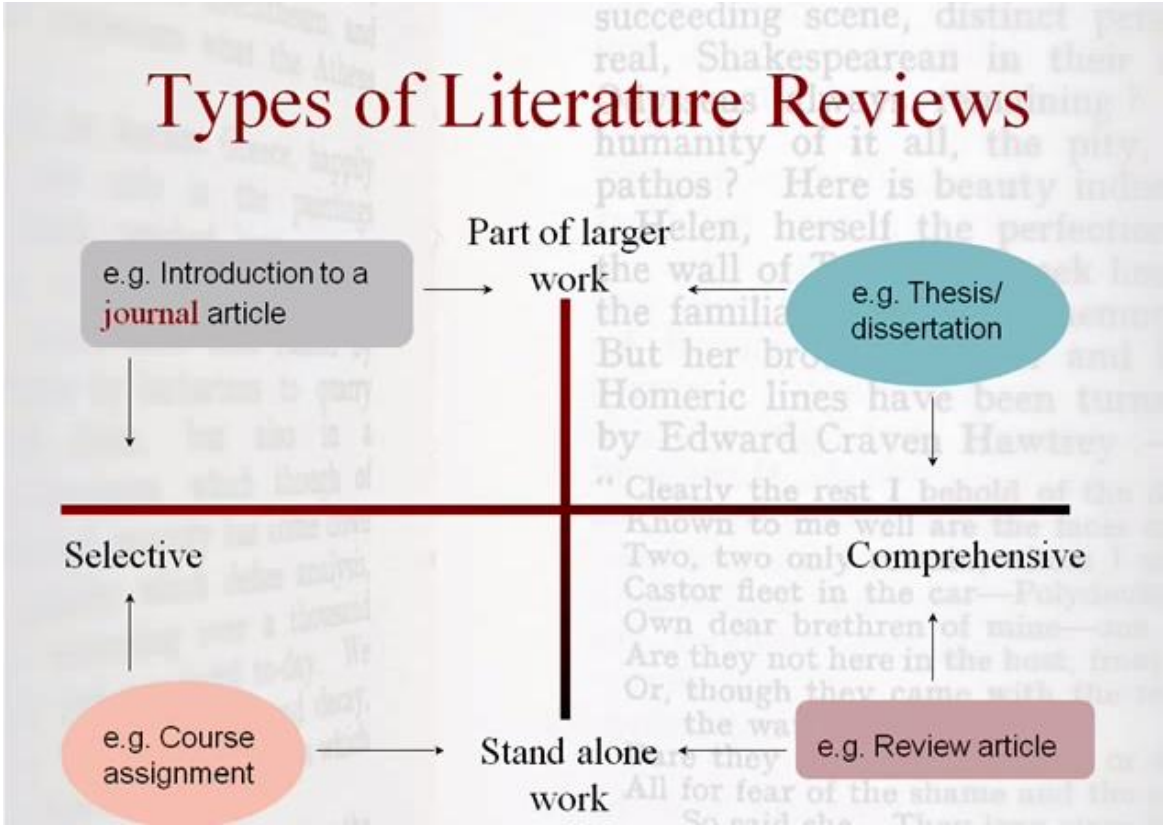
A literature review is conducted in the beginning stages of your research, and is usually written up as a document or chapter by the same title. It requires a commitment to searching a range of information sources



Features of a Research Paper

- Abstract
- Introduction: Research question or Hypothesis, Aims
- **Literature Review**
- Presentation of Findings
- Analysis and Interpretation
- Limitations
- Recommendation
- Conclusion
- References

What is a literature review?



Use/Purpose?

Use/Purpose?

Place each work in the context of its contribution to the understanding of the subject under review

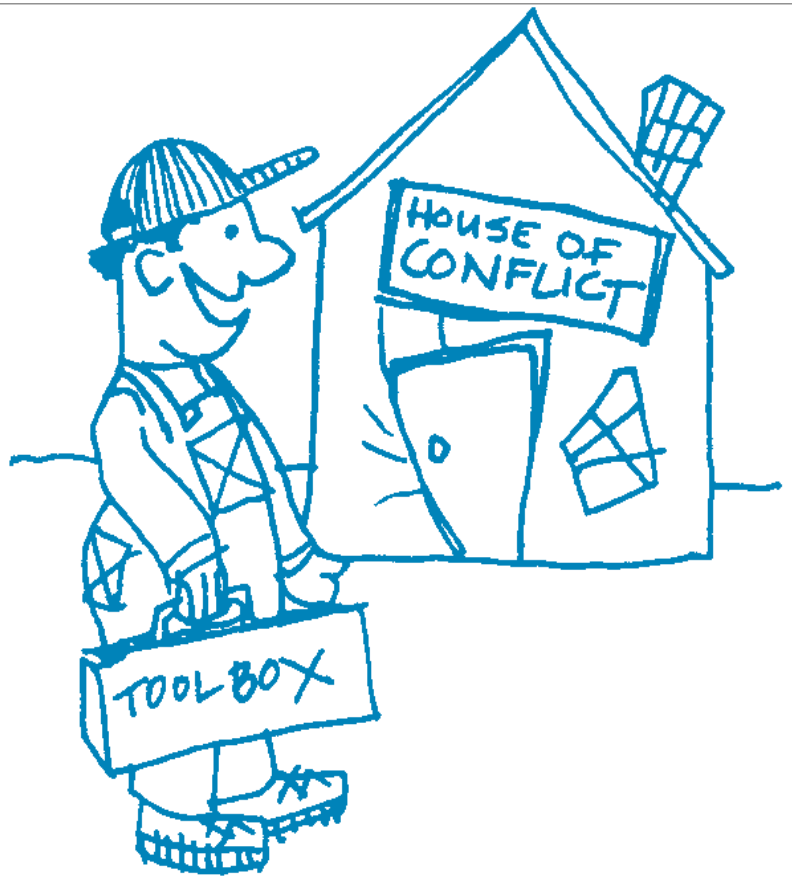
Use/Purpose?

Describe the relationship of each work to the others under consideration

Use/Purpose?

Resolve conflicts amongst seemingly contradictory previous studies

Identify areas of prior scholarship to prevent duplication of effort



Use/Purpose?

Point the way forward for further research

Use/Purpose?

Identify new ways to interpret, and shed light on any gaps in previous research

Components

Components

Development of the literature review requires four stages:

1-Problem formulation

Components

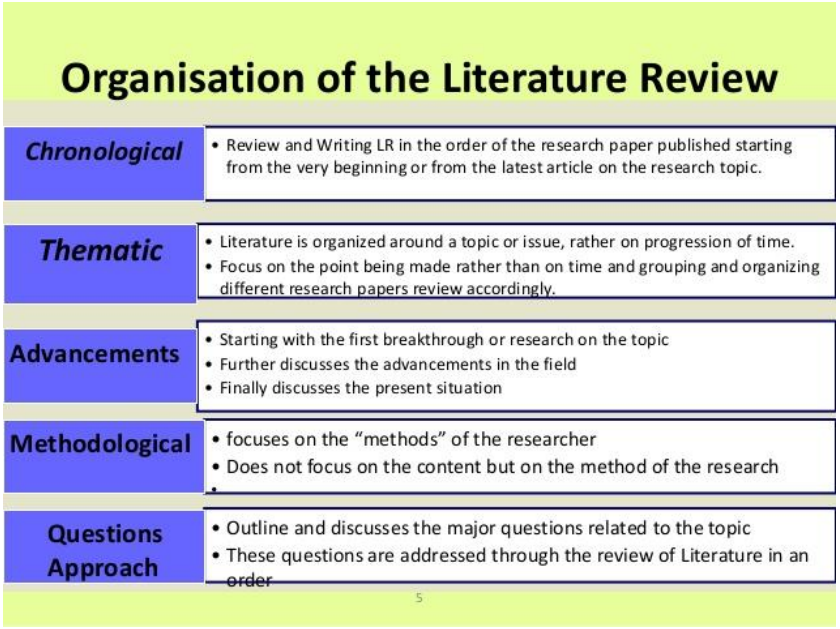
Development of the literature review requires four stages:

2-Literature search

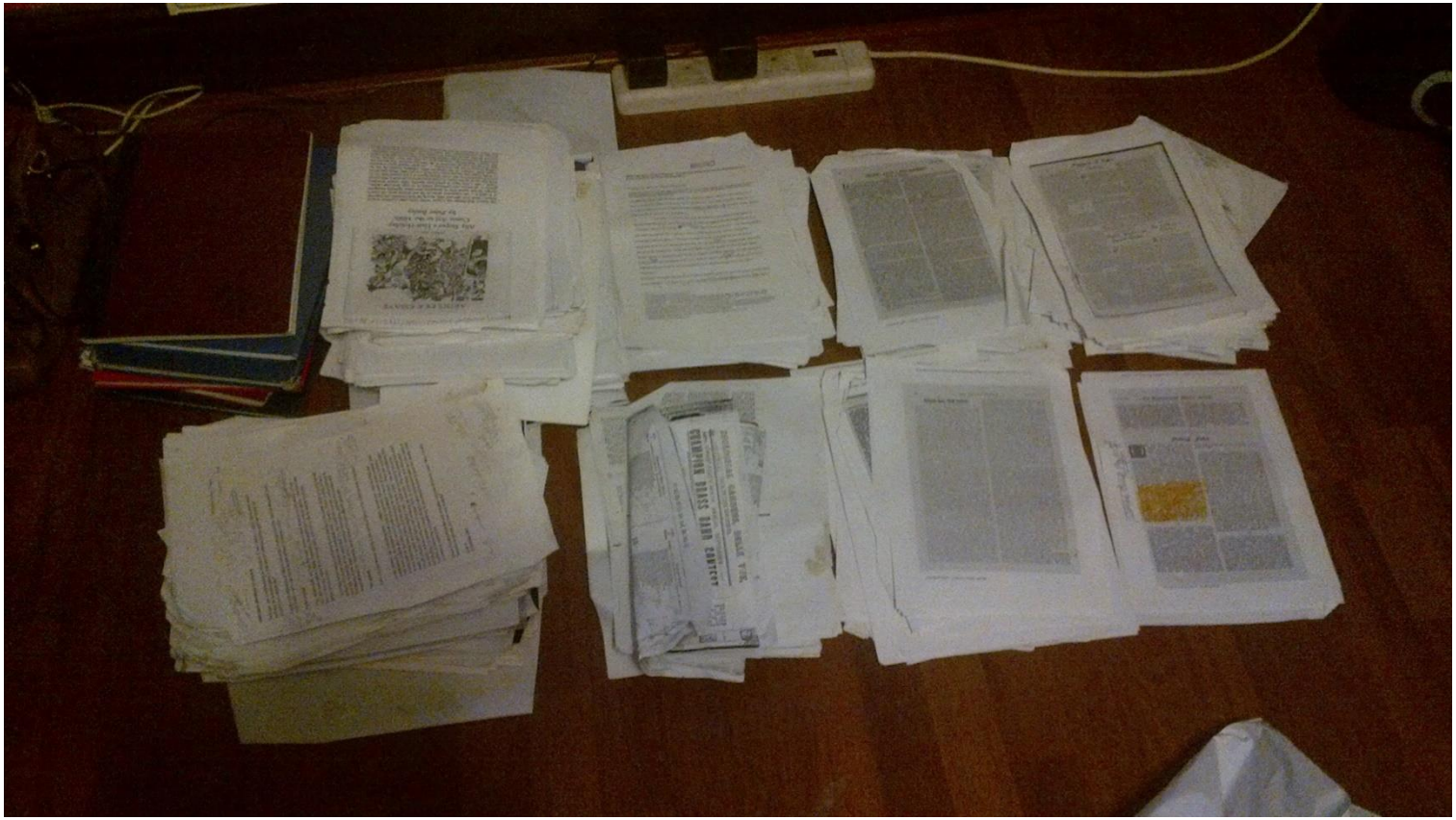
Components

Division of works under review into categories

Components


Organisation of the Literature Review
Chronological
• Review and Writing LR in the order of the research paper published starting from the very beginning or from the latest article on the research topic.
Thematic
• Literature is organized around a topic or issue, rather on progression of time.
• Focus on the point being made rather than on time and grouping and organizing different research papers review accordingly.
Advancements
• Starting with the first breakthrough or research on the topic
• Further discusses the advancements in the field
• Finally discusses the present situation
Methodological
• focuses on the "methods" of the researcher
• Does not focus on the content but on the method of the research
Questions Approach
• Outline and discusses the major questions related to the topic
• These questions are addressed through the review of Literature in an order
5

Before you start your search!



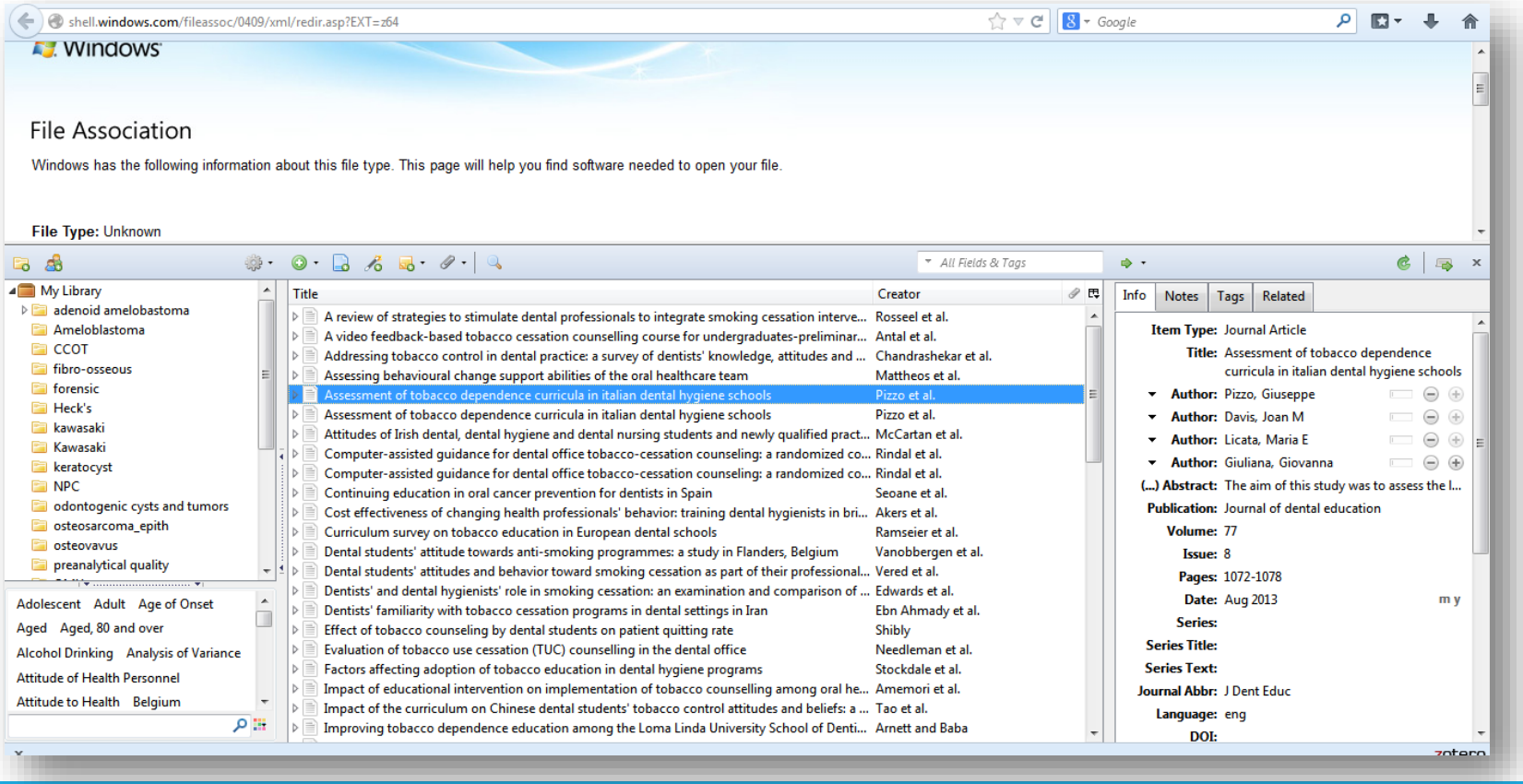
Before you start your search!

Citation and organization: Which reference manager is the right fit for you?

References managing

How to cite?

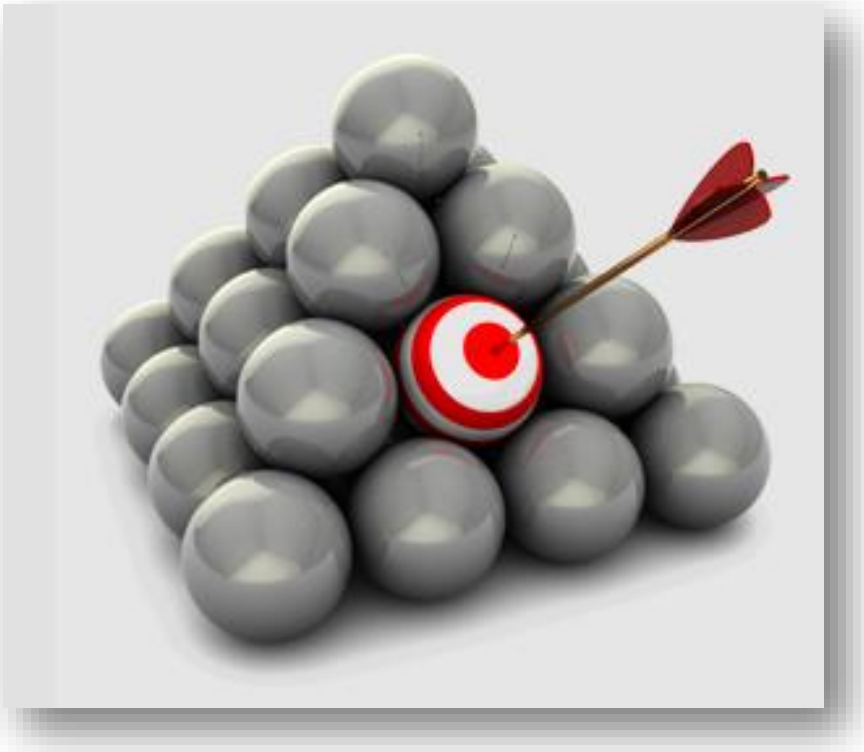
Reference mangers



Components

Development of the literature review requires four stages:

3-Data evaluation



Components

Development of the literature review requires four stages:

4-Analysis and interpretation

Explanation of how each work is similar to and how it varies from the others

Conclusions as to which pieces are best considered in their argument

Literature Assessment

In assessing each piece, consideration should be given to:

Provenance المصدر

Objectivity الموضوعية

Persuasiveness الأقناع

Value القيمة

Literature Assessment

In assessing each piece, consideration should be given to:

Provenance—What are the author's credentials? Are the author's arguments supported by evidence (e.g. primary historical material, case studies, narratives, statistics, recent scientific findings)?

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Guanylyl cyclase C signaling axis and colon cancer prevention

Amanda M Pattison, Dante J Merlino, Erik S Blomain, Scott A Waldman

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Author contributions: Pattison AM designed and composed the manuscript; Merlino DJ and Blomain ES helped compile, edit, and revise the manuscript; Waldman SA devised the manuscript content, oversaw manuscript preparation, and participated as the scientific advisor; all authors provided final approval of the version submitted and any revised versions.

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Literature Assessment

In assessing each piece, consideration should be given to:

Objectivity—Is the author's perspective even-handed or prejudicial?

Literature Assessment

In assessing each piece, consideration should be given to:

Persuasiveness—Which of the author's theses are most/least convincing?

Literature Assessment

In assessing each piece, consideration should be given to:

Value—Are the author's arguments and conclusions convincing? Does the work ultimately contribute in any significant way to an understanding of the subject?

Writing A Literature Review and Using a Synthesis Matrix

One way that seems particularly helpful in organizing literature reviews is the **synthesis matrix**.

Writing A Literature Review and Using a Synthesis Matrix

The synthesis matrix is a chart that allows a researcher to sort and categorize the different arguments presented on an issue.

Topic: _____

	Source #1	Source #2	Source #3	Source #4
Main Idea A				
Main Idea B				

Writing A Literature Review and Using a Synthesis Matrix

Citation	Type *	Patients/Subjects	Interventions	Comparisons	Outcomes	Your Evaluation (Strengths, Limitations, Relevance)
Talar-Williams, C., Hijazi, Y.M., Walther, M. M., Linehan, M. W., Hallahan, C. W., Lubensky, I., Kerr, G. S., Hoffman, G. S., Fauci, A. S., Sneller, M. C. (1996). Cyclophosphamide-Induced Cystitis and Bladder Cancer in Patients with Wegener Granulomatosis. *Annuals of Internal Medicine,* 124(5), 477-484. Retrieved October 5, 2003, from http://www.annals.org/cgi/content/full/124/477	3	• **145 patients** (Followed 0.5 – 27 years/ 1333 pat. years) at one NIH institution • 73 men;72 women; • median age = 40 (10-72) • 140 White;3 Black; 2 Other 61 Smokers; 73 Nonsmokers; 11 Unknown	Treated with CYC	Rate of Occurrence of 145 patients treated with CYC compared to expected rates for the US population (obtained from SEER Cancer Statistic Review) 31 Fold Increase in Incidence – adjusted for age; younger than 65 y/o 51-fold increase	• 73/145 (50%) had nonglumerular hematuria. • 60/73 had cystoscopy. • 7 patients out of 145 exposed to cyclophosphamide were diagnosed with Transitional Cell Carcinoma. All 7 had microscopic hematuria. • Latency period was 7mos to 15.3 years from last dose to diagnosis. • The median age was 53y/o. • 6/7 were smokers. 0/7 clinical conditions to enhance toxicity; 0/7 dye exposures. • Average cumulative dose > 100g for > 2.7 years. • Cox proportional hazards regression analysis showed only microscopic hematuria as a significant factor for development of bladder cancer ($P < 0.01$). • Incidence of Bladder Cancer was 5% at 10 yrs and 16% at 15 yrs. • Only nonglumerular hematuria was significant as risk factor.	Retrospective Analysis; Cohort; Quasi-Experimental • Retrieved via Google Search/Primary Source • **Strengths** – A standardized protocol was used for oral CYC treatment regimen for all patients. This article addressed risk factors. It is a primary source document. Offering important evidence to support the research question using direct research methods. It provides extremely good information on proposed long term follow-up for patients exposed to cyclophosphamide. Duration and Dose are addressed. Diagnostic tests are well described. Statistical significance of risk factor of microscopic hematuria. Analyzed using computer based information retrieval system. The methods used were strict with patients treated according to protocol and followed-up for urotoxicity. Each patient was evaluated every 3-6 months with urinalysis and every 6-12 months with urine cytology. Patients with microscopic hematuria or nonglumerular hematuria had cystoscopy done. Cystoscopy was done with biopsy if cytology suggested malignancy. **Limitations** – Unknown factors over the course of long follow up period. No inclusion of patient family history statistics. **Relevance** – Good Resource (Include)

Let’s get to it! What should I do before writing the literature review?

Clarify

If your assignment is not very specific, seek clarification from your instructor

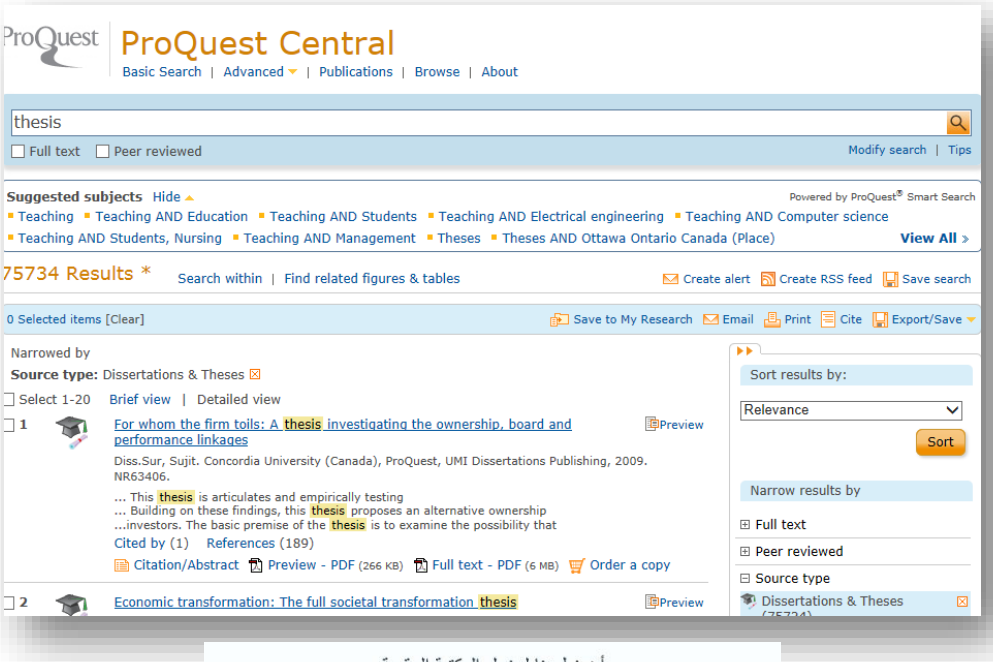
Let’s get to it! What should I do before writing the literature review?

Clarify

Should you summarize, synthesize, or critique your sources by discussing a common theme or issue?

Let’s get to it! What should I do before writing the literature review?

Find models



Let’s get to it! What should I do before writing the literature review?

Consider whether your sources are current

Strategies for writing the literature review

Find a focus

A literature review is usually organized around ideas, not the sources themselves as an annotated bibliography would be organized. This means that you will not just simply list your sources and go into detail about each one of them, one at a time.

Strategies for writing the literature review

Construct a working thesis statement

Use the focus you've found to construct a thesis statement.

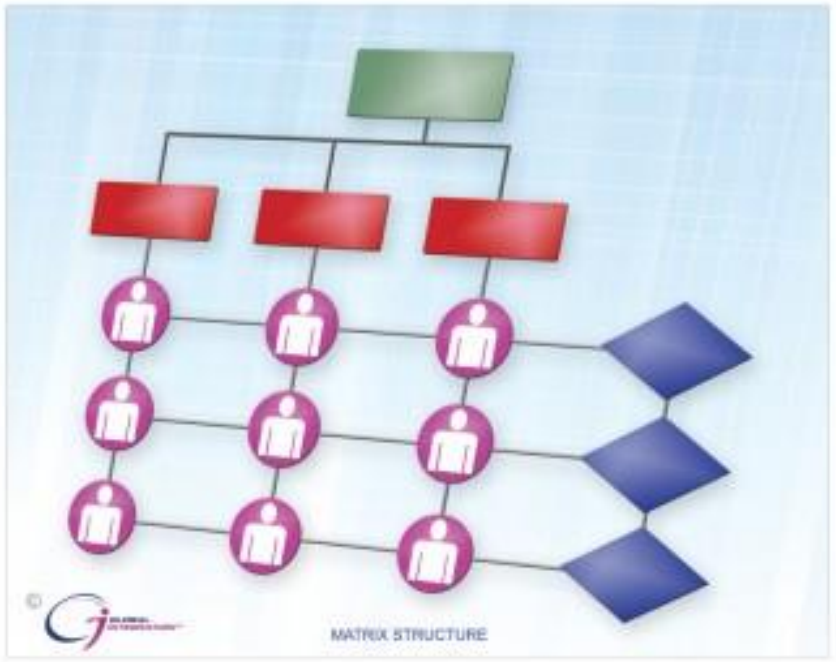
Strategies for writing the literature review

Consider organization

You've got a focus, and you've narrowed it down to a thesis statement.

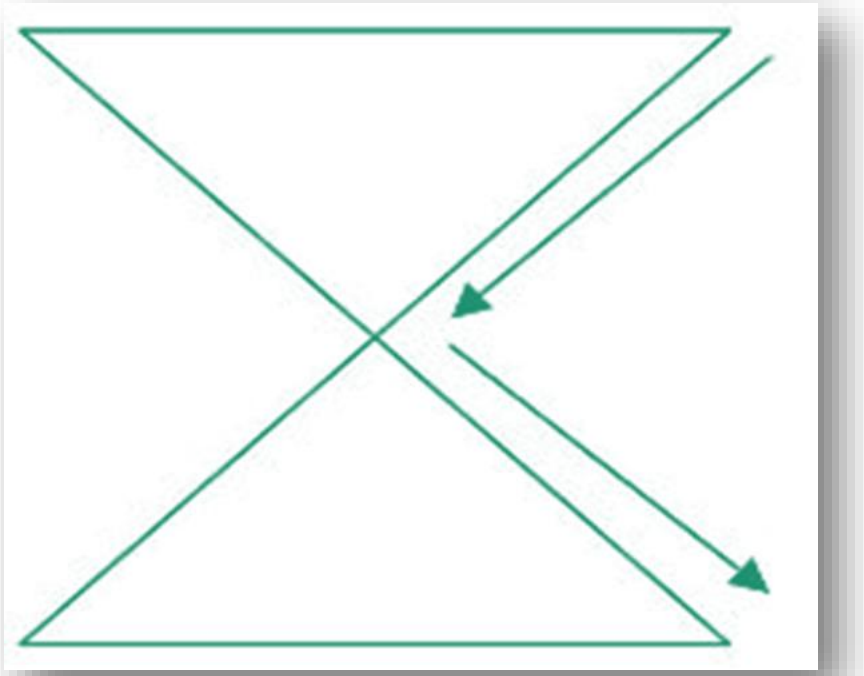
What are the most important topics, subtopics, etc., that your review needs to include?

And in what order should you present them?



Begin composing

Once you've settled on a general pattern of organization, you're ready to write each section. There are a few guidelines you should follow during the writing stage as well.



Begin composing

Use evidence

Your interpretation of the available sources must be supported with evidence to show that what you are saying is valid

Begin composing

Be selective

Select only the most important points in each source to highlight in the review.

Begin composing

Use quotes sparingly

Begin composing

Summarize and synthesize

Remember to summarize and synthesize your sources within each paragraph as well as throughout the review.

Begin composing

Keep your own voice

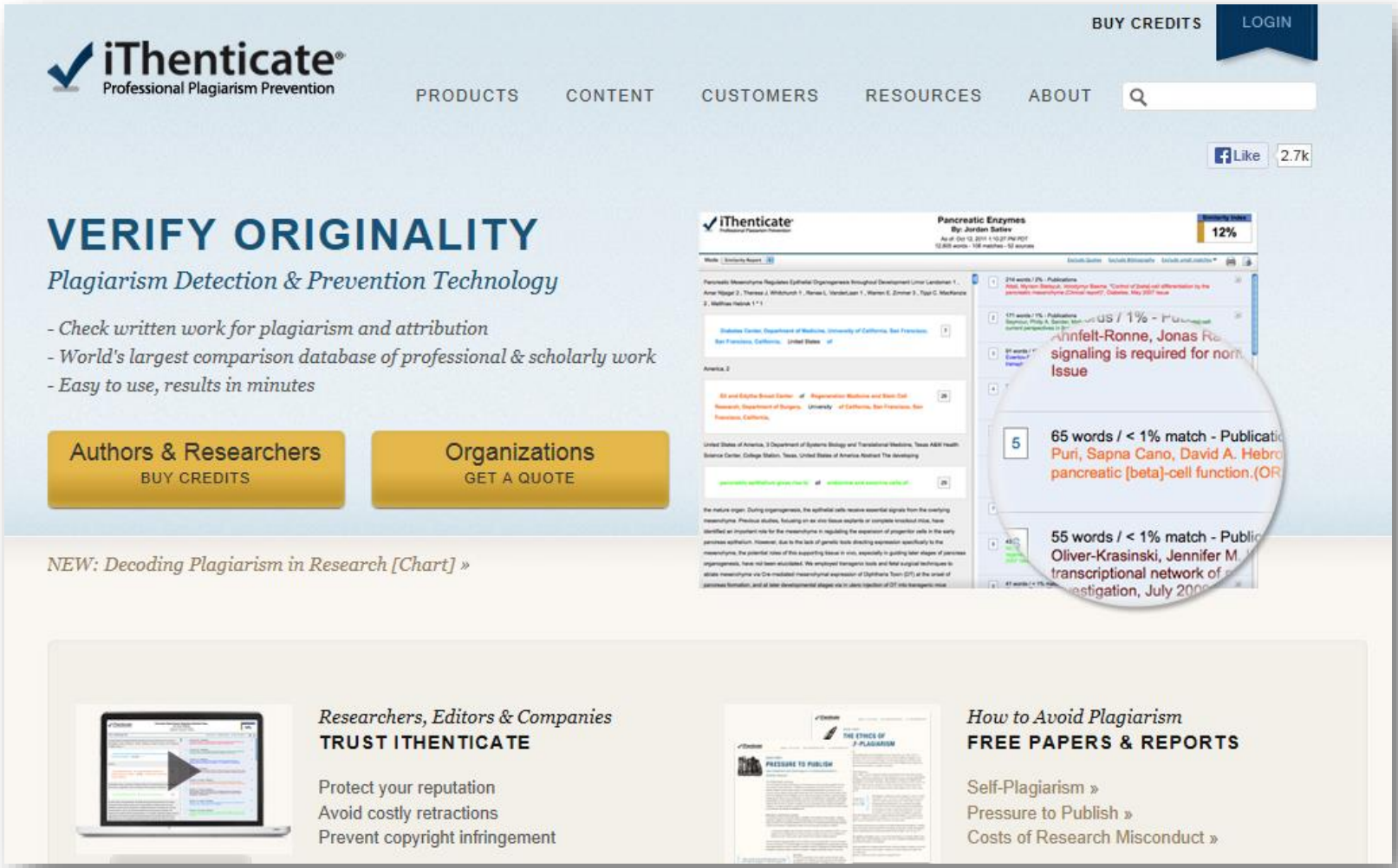
While the literature review presents others' ideas, your voice (the writer's) should remain front and center.

Begin composing

Use caution when paraphrasing

When paraphrasing a source that is not your own, be sure to represent the author's information or opinions accurately **and in your own words.**

Plagiarism??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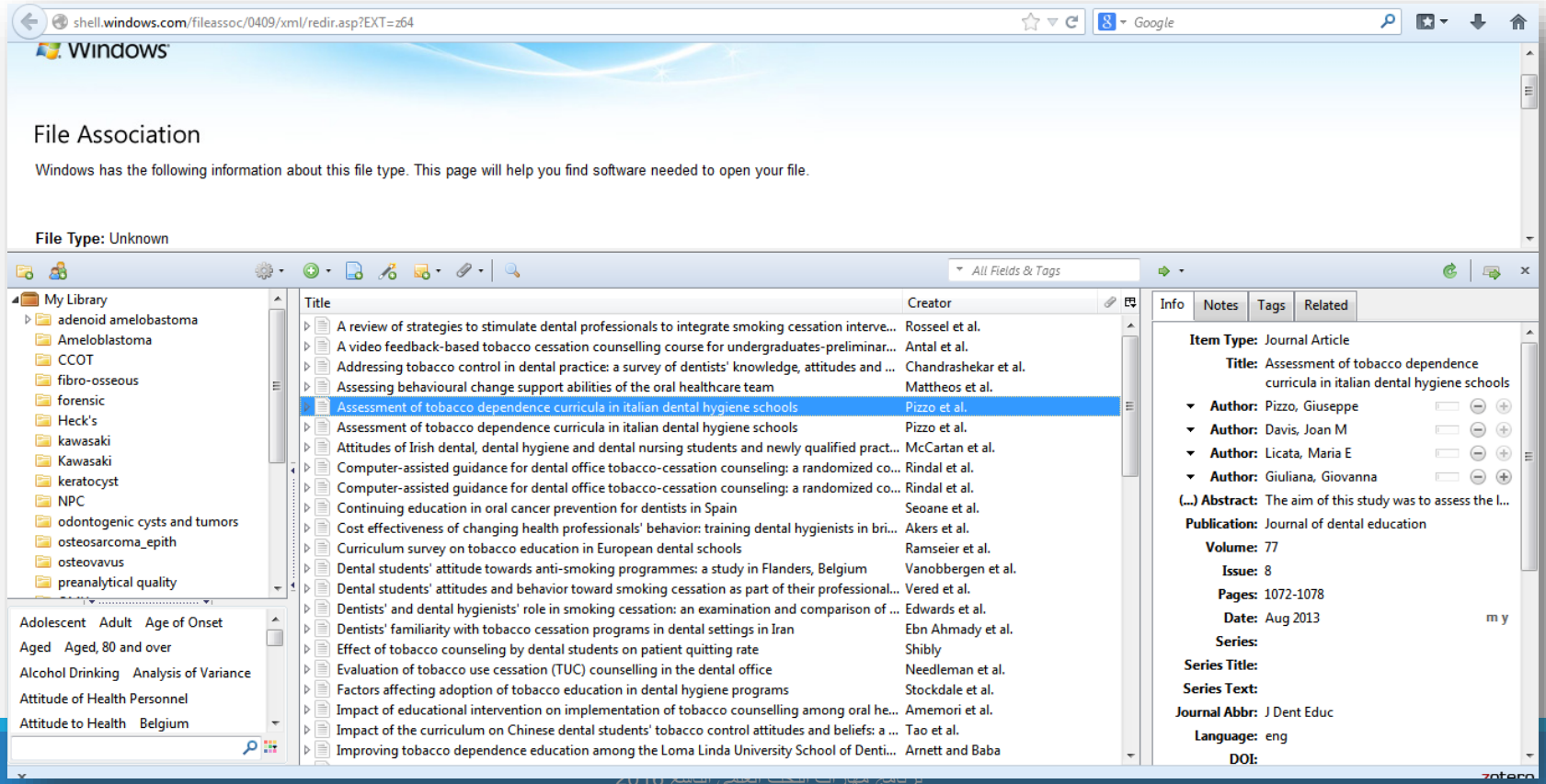

Revise, revise, revise

Draft in hand? Now you're ready to revise. Spending a lot of time **revising is a wise idea**, because your main objective is to present the material, not the argument. So check over your review again to make sure it follows the assignment and/or your outline.

Revise, revise, revise

Then, just as you would for most other academic forms of writing, **rewrite or rework the language of your review** so that you've presented your information in the most concise manner possible.

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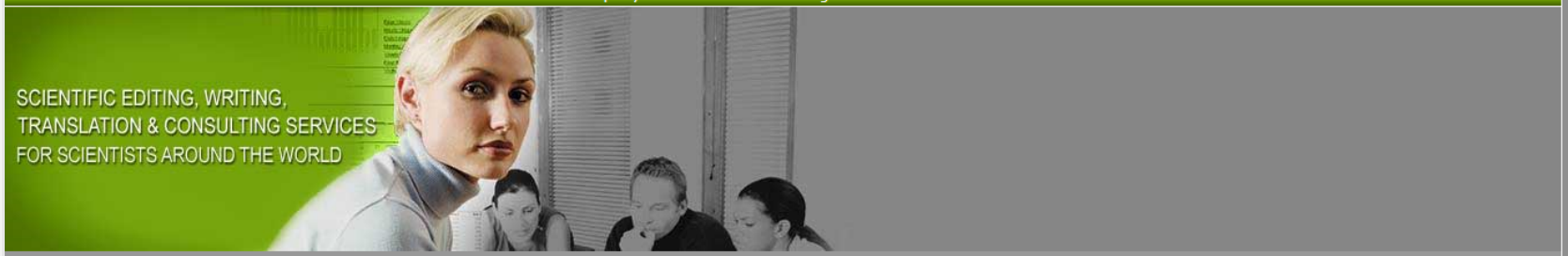

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Some tips to help you be effectual !!

Some tips to help you be effectual

1. Write a sentence or two after reading an article that could fit into your literature review. This is not a summary, but how the article relates to your literature review theme

Some tips to help you be effectual

2. Aim to write something every day. Set a writing goal, whether it’s a paragraphe or a page. Only do reading so that you can achieve your writing goal.

Some tips to help you be effectual

3. Ask yourself why should you read this paper. Before you read anything, think about how it should contribute to your literature review and look for that information in the article.

Some tips to help you be effectual

4. Narrow down your search terms. Only search for things that return a manageable number of search results.

Some tips to help you be effectual

5. Set regular, strict deadlines. Decide that you must complete a certain quantity of writing by a certain date and stick to it.

Tips for effective literature searching and keeping up with new publications

Define your keywords

Checklist for defining keywords

1. What alternative vocabulary is used in discussion of my topic?
2. Are there American and British variants of spelling or vocabulary?
3. Can I identify a word-stem for truncation? E.g., child$ to find child, children, or childish.
4. Are common abbreviations, acronyms or formulae used?
5. What specific cases or examples am I interested in?
6. What more general terms might include my topic?
7. Are there categories I'd like to exclude?

Start your search

You might need to search several academic databases to make sure you've covered all bases. Since each database has unique sources for obtaining data and unique processes for deciding which journal articles to index, limiting your search to only one database may cause you to overlook relevant articles. For example, if you restrict your search to Elsevier's Science Direct, you are very likely to miss relevant publications, since this database mostly indexes journals published by Elsevier.

Sources for searching

Bibliographic/general databases	Publisher databases and journal websites	Subject-specific databases
E.g., Scopus, ISI Web of Knowledge, Google Scholar, EMBASE, JSTOR, ProQuest	E.g., Elsevier's ScienceDirect, SpringerLink, Wiley Online Library, Oxford Journals	E.g., Medline, PsychINFO, MathSciNet, arxiv.org, Sociological Abstracts, EconLit, ERIC, INSPEC
Use to • Browse for popular and high quality articles • Start the discovery process and find an initial set of papers	Use to • Browse through journals that frequently publish on your topics of interest • Browse through journals specific to your specialization	Use to • Look for articles in a specific discipline • Do in-depth research on a particular topic • Look for articles on obscure or niche topics

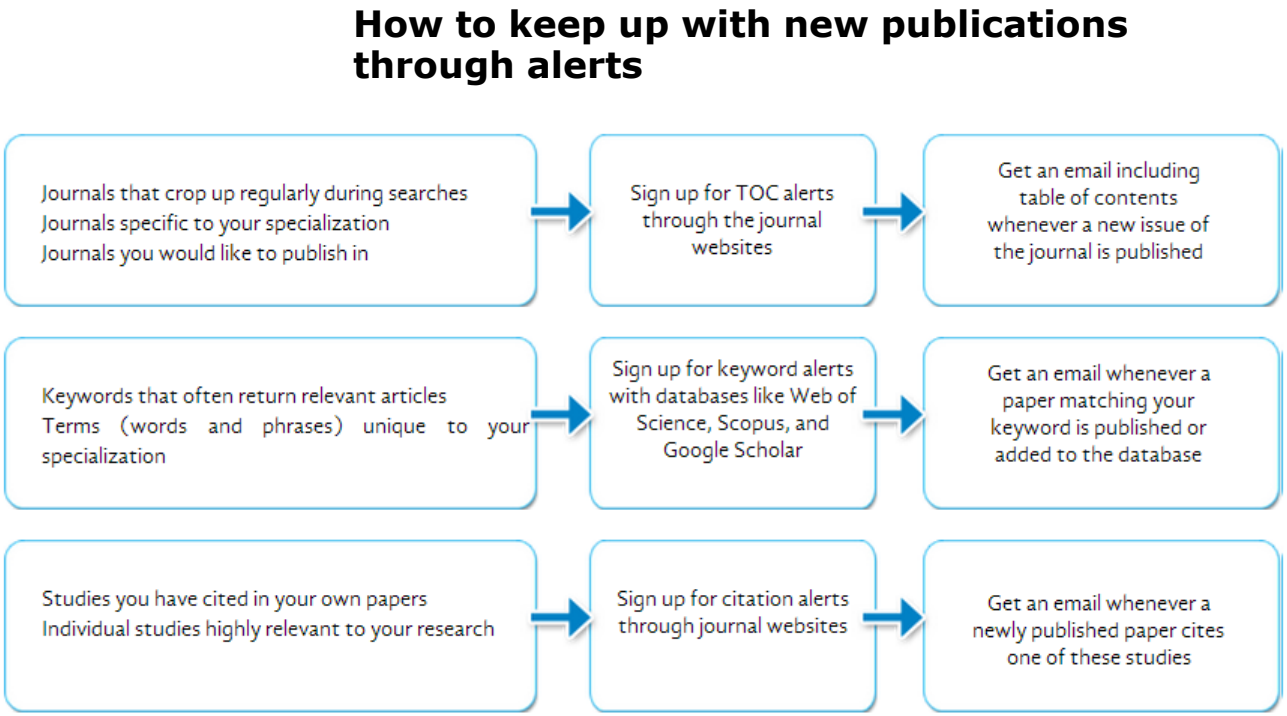
Follow the citations

Once you have identified some relevant journal articles, an easy way to find more studies is by looking through the reference lists of these articles (backward searching). The reference studies are likely to be quite relevant for you as well. In addition, look at the papers that have cited the articles since they were published (forward searching). This will help you find the newer studies that have built upon the work

Keep a written record of your searches

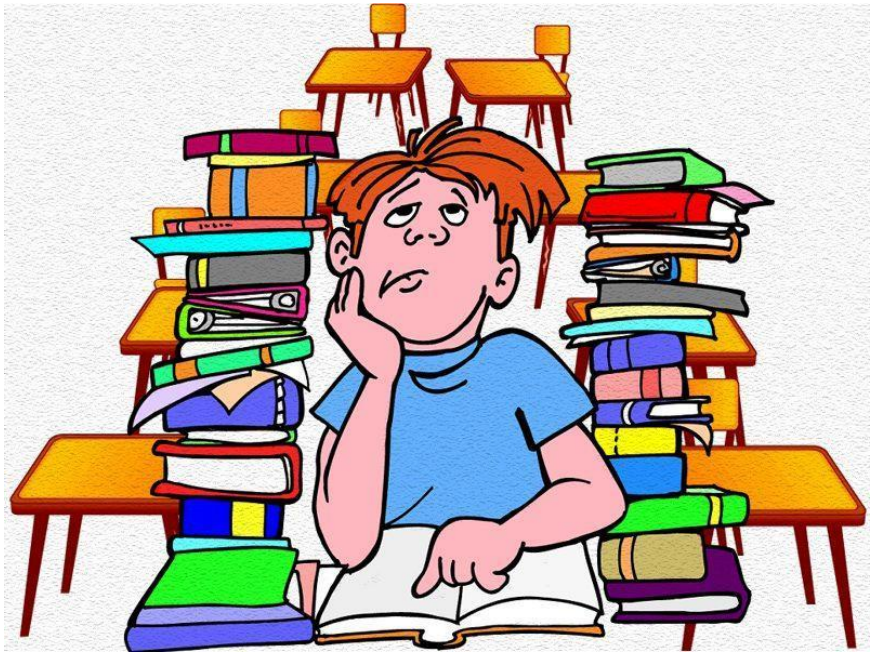
Note down the names of journals that you come across often during your searches. Over time, you will get a good idea of which journals are most prominent in your field and which journals you should consider publishing in. In addition, keep a list of the keywords and keyword combinations that return the best results. This will not only reduce the time taken for future searches but also yield a list of terminologies that are common in your field

Keeping up with literature



Conclusion

The literature review is the trickiest part of a dissertation



Conclusion

The dissertation literature review **consumes most the time and energy** of a researcher in proving his findings to the board of dissertation committee.

Conclusion

The best way to do this is gather the best ones and keep it in line with your topic in order to avoid unnecessary questions gathered from an excessive analysis

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http://writingcenter.unc.edu/handouts/literature-reviews/

https://www.coursera.org/course/sciwrite

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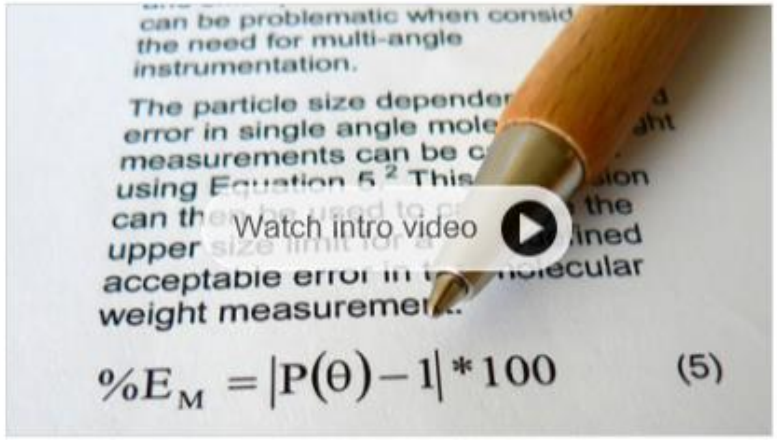

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