WRITING A LITERATURE REVIEW

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Sept.11
2023

Today's Outline

- Overview/Process
- Question
- Search
- Manage
- Synthesize
- Write

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Have you written a literature review in the past?

- Yes
- No

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If yes, did you enjoy doing it?

- Yes
- No

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If no, what frustrated you the most?

A. Forming a research question
B. Searching for relevant literature
C. Scoping the research
D. Managing research findings
E. Synthesizing research findings
F. Writing the literature review
G. Other, please specify

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What is a literature review?

A literature review is a written appraisal of what is already known – exiting knowledge on a topic.

Jesson, J., Matheson, L., & Lacey, F. (2011). *Doing your literature review : Traditional and systematic techniques*. Los Angeles, Calif. ; London: SAGE.

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Why do a literature review?

- Identifies what is already known about an area of study
- Recognizes questions a body of research does not answer
- Makes a case for why further study of research questions is important to a field

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Format of a literature review

- a part of a research project and dissertation
  Or
- a stand-alone review

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Example 1

Introduction

With the advent of information communication technologies, global climate change (GCC) has become one of the most debated socio-scientific issues in popular and social media outlets. Furthermore, there was increased media attention on the issue during the negotiation of the Kyoto Protocol and the release of Al Gore's documentary film *An Inconvenient Truth*. Given the controversial nature of the issue, the complex science knowledge surrounding it, and the vast amount of information available on the internet, research has indicated that individuals across different age levels often have conflicting views about this serious planetary issue (Aksan and Çelikler 2013; Ambusaidi et al. 2012; Boon 2010; Kilinc, Stanisstreet, and Boyes 2008; Kişoğlu et al. 2010; Lambert, Lindgren, and Bleicher 2011; Papadimitriou 2004).

Making well-informed decisions about socio-scientific issues requires learners to have fundamental scientific knowledge surrounding these issues (Hogan 2002; Sadler and Zeidler 2005; Zohar and Nemet 2002). However, research has found that students in K-12 hold alternative conceptions, even after instruction, about the science concepts and phenomena underlying important socio-scientific issues such as GCC (Niebert and Gropengiesser 2012; Niebert and Gropengießer 2014). These conceptions persist even after instruction (Groves and Pugh 2002). To help students become scientifically literate enough to make informed decisions about socio-scientific issues, teachers should play a crucial role in fostering their students' understanding. However, it has been repeatedly found that science teachers also hold alternative conceptions about GCC (Dawson 2012). The results were similar for pre-service science teachers (Aksan and Çelikler 2013; Bleicher and Lambert 2013; Kişoğlu et al. 2010; Lambert, Lindgren, and Bleicher 2012; Ocal et al. 2011). For example, study results regarding pre-service teachers' alternative conceptions about the underlying science content behind GCC suggest that pre-service teachers confuse explanations of weather and climate and incorrectly indicate ozone depletion or pollution as primary sources of temperature increase and environmental harm (Groves and Pugh 2002; Papadimitriou 2004).

Namdar, B. (2018). Teaching global climate change to pre-service middle school teachers through inquiry activities. *Research in Science & Technological Education*, *36*(4), 440–462. https://doi-org.ezp-prod1.hul.harvard.edu/10.1080/02635143.2017.1420643

Example 2

Literature Review

The value of international exchange and international students on U.S. college campuses cannot be underestimated. Hegarty (2014) argued that although U.S. universities may recognize the value of enrolling international students, many of them fail to understand the scale of influence international students bring as a vital component to higher education, particularly because they enrich university environments intellectually and culturally (Luo & Jamieson-Drake, 2013).

For decades, U.S. higher education researchers have stressed that college-sponsored student success programs are important to the academic success and engagement of all students (Kuh, Kinzie, Schuh, & Whitt, 2005; Tinto, 1998). For international students and, in some cases, their families, university-based academic and social support services have been highlighted as key to international student success and continued matriculation in higher education institutions (Cho &Yu, 2015; Glass, Gomez, & Urzua, 2014; Zhang & Goodson, 2011; Zhao, Kuh, & Carini, 2005). Researchers also have indicated that international students experience unique challenges related to their social adjustment and academics that often require specialized support services (Andrade, 2006; Hendrickson, Rosen, & Aune, 2011; Perry, 2016; Zhang & Goodson, 2011).

In recent years, however, some global scholars (Rose-Redwood, 2017; Tardy, 2017; Vasiloupolos, 2016) have argued for a more nuanced, critical view of research on international students' experiences, particularly as extant research has focused on students who attend Western Anglophone universities or institutions located in Australia, New Zealand, the United Kingdom, Canada, and the United States. As more countries around the world (e.g., China, India) offer increasing opportunities that attract international students, critical scholars are calling for more expansive research that goes beyond a focus on academic and social adjustment and acculturation. Despite this recent

call in response to heightened global tensions, for purposes of this study on support services offered by top enrolling U.S. universities, we briefly reviewed the extant literature on international student support needs from a programmatic perspective. This review also includes information on suggested best practices in supporting international students.

Social Adjustment Challenges of International Students in the United States

Adjustment in academic settings describes the extent to which there is a "fit" between students and the academic environment (Andrade, 2006). Overall, when compared to host country students, international students are more likely to experience anxiety, homesickness, and stress in adjusting to college (Fritz, Chin, & DeMarinis, 2008). Separation from close family and friends, lack of comfort and familiarity with different cultural practices (e.g., foods and social customs), social isolation, and challenges with host country language proficiency contribute to challenges with social adjustment (Johnson & Sandhu, 2007; Khawaja & Stallman, 2011).

Researchers (e.g., Ebinger, 2011; Jackson, Ray, & Bybell, 2013) have examined various contributing factors to social adjustment of international students. Friendship is cited as an important social adjustment factor. In fact, social support is highlighted as one of the most essential determinants of the psychological well-being of international students (Misra, Crist, & Burant, 2003). Many scholars emphasize that international students' adjustment in U.S. colleges is contingent on how well students can establish social

Academic Challenges of International Students in the United States

Although academic pursuits are reported as a primary goal for most international students, Choi (2006) emphasized that minimal research has addressed the academic adjustment of international students, compared to other areas of adjustment (e.g., acculturation, psychological adjustment). Much of the extant literature (e.g., Andrade, 2006; Araujo, 2011) focuses on a discussion of the critical role of English language proficiency on the academic achievement of international students because many international students studying in the United States do not speak English as their first language and, therefore,

Martirosyan, N. M., Bustamante, R. M., & Saxon, D. P. (2019). Academic and social support services for international students: Current practices. *Journal of International Students*, *9*(1), 172–191. Retrieved from http://search.ebscohost.com.ezp-prod1.hul.harvard.edu/login.aspx?direct=true&db=eric&AN=EJ1208150&site=ehost-live&scope=site

A literature review is a research journey with several steps:

- Framing a **research question**
- **Searching** relevant bodies of literature
- **Managing** search results
- **Synthesizing** the research literature
- **Writing** an assessment of the literature

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RESEARCH QUESTION

Definition:
Research questions are the questions which you seek to answer in your investigation. (Lambert, 2012)

Purpose:
The research question guides your literature review by establishing its parameters and articulating a researchable question.

Process:
- Identify an area of study which is of interest
- Refine this area of study based on an exploration of the literature
- Examine research variables (e.g., gender, age, context, etc.) which influence your question
- Map the literature to identify relationships. Mapped relationships may highlight issues or connections within the field.
- Draw on what you have learned to draft your research question

Lambert, M. (2012). *A beginner's guide to doing your education research project*. London ; Thousand Oaks, Calif.: Sage.

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RESEARCH QUESTION

Sample Research Questions

Topic	Weaker question	Stronger question(s)	Why is the stronger question better?
College and career readiness	How can districts increase college and career readiness?	Does increasing access to Advanced Placement courses improve college enrollment rates? How do high school guidance counselors decide which services to offer to which students?	Specific and focused
Differences by race in dropout rates	Why are Black students more likely to drop out than white students?	What characteristics of school environments support Black students in staying enrolled in school?	Complex answer
Tracking	Should we track students in our mathematics courses?	What do we know from prior research about the impact of being placed in a higher or lower mathematics track on student outcomes?	Answerable with evidence
Family engagement	How can teachers increase family engagement?	How do families characterize their relationship with their child's teacher? What suggestions do families have for increasing family engagement?	Specific and focused
Student social media use	Why do students spend so much time on social media?	How much does student time spent on social media vary by age? What are students' views on the pros and cons of social media?	Specific and focused Answerable with evidence

Gutman Library (2020, May 30). Literature Review: A Research Journey. Harvard Canvas. https://canvas.harvard.edu/courses/32423/pages/defining-your-research-question?module_item_id=857047

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SEARCH

Purpose:
To gather the works of scholars who have addressed your research question.

Process:

- Save time! Work with a librarian.
  - Mary Frances Angelini
  - Jonathan Paulo
- Get the big picture. Search broad concepts in HOLLIS, the Harvard Library Discovery Tool, and Google Scholar.
- Mine reference lists. Use Citation Linker to find the full text of articles cited.
- Identify article databases for bodies of literature relevant to your research question.
- Use language from your research question to begin your search and then map your language to the subject vocabulary of the databases you're searching in. Key words, authors, concepts.
- Use cited reference searching to find later works that cite a particularly useful work.

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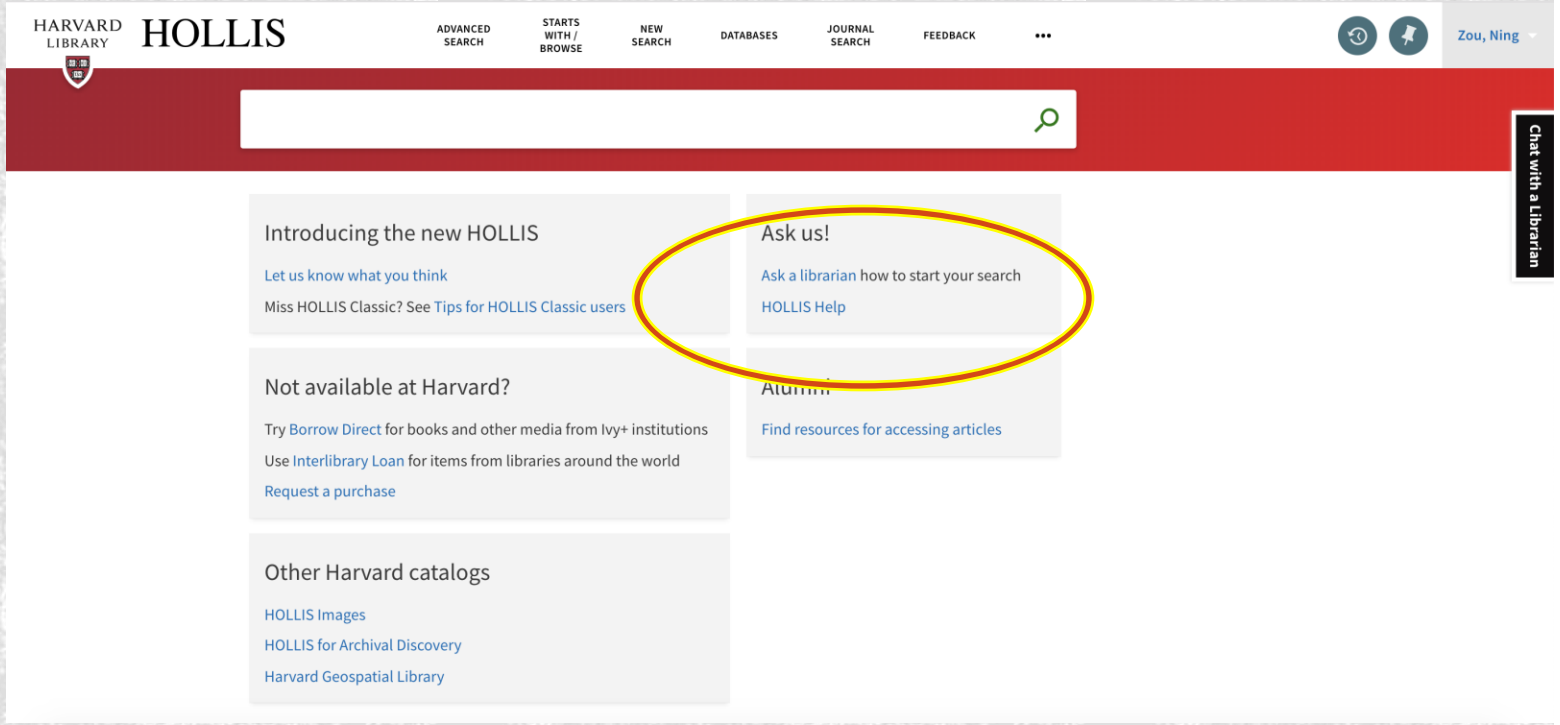
SAVE TIME AND ASK US!

HOLLIS – the Harvard Library Discovery Tool

https://hollis.harvard.edu



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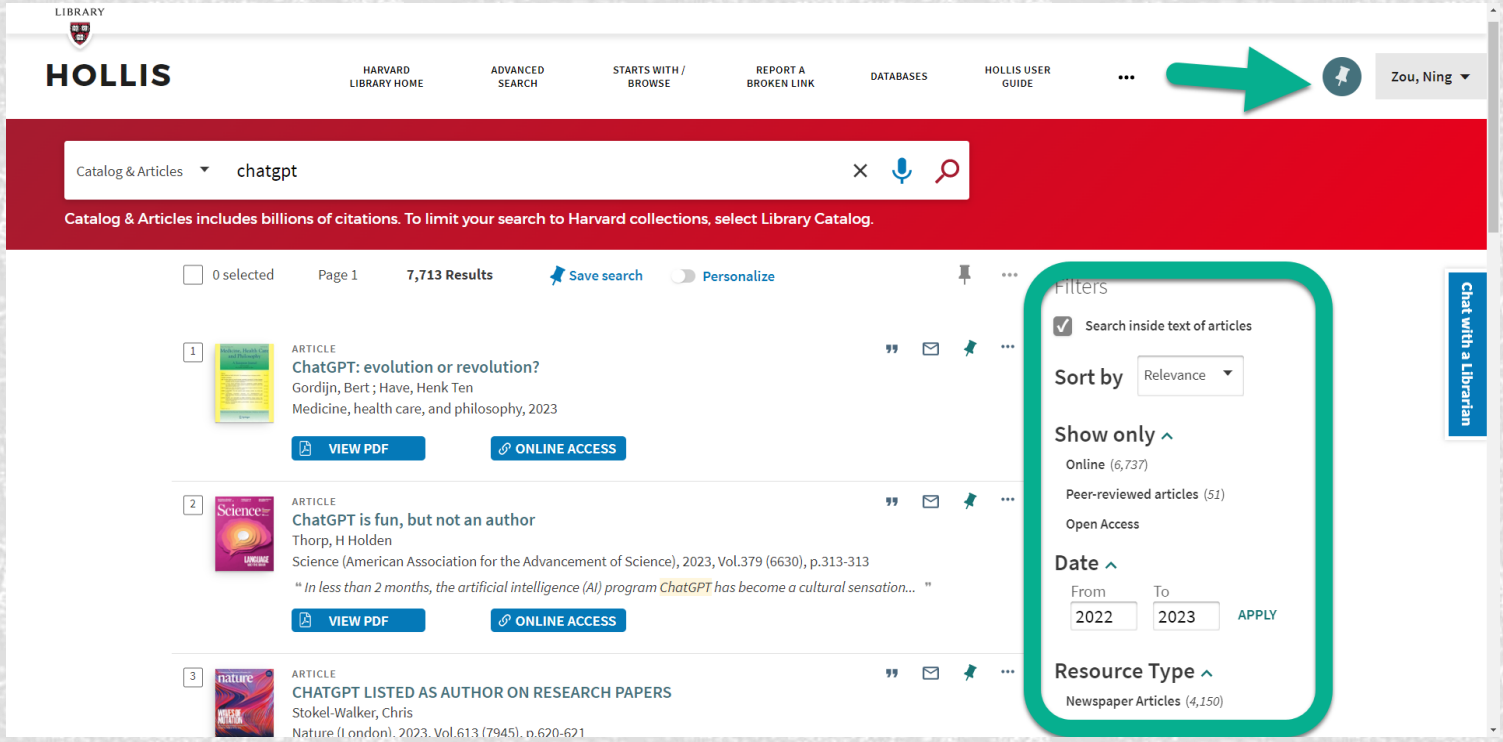
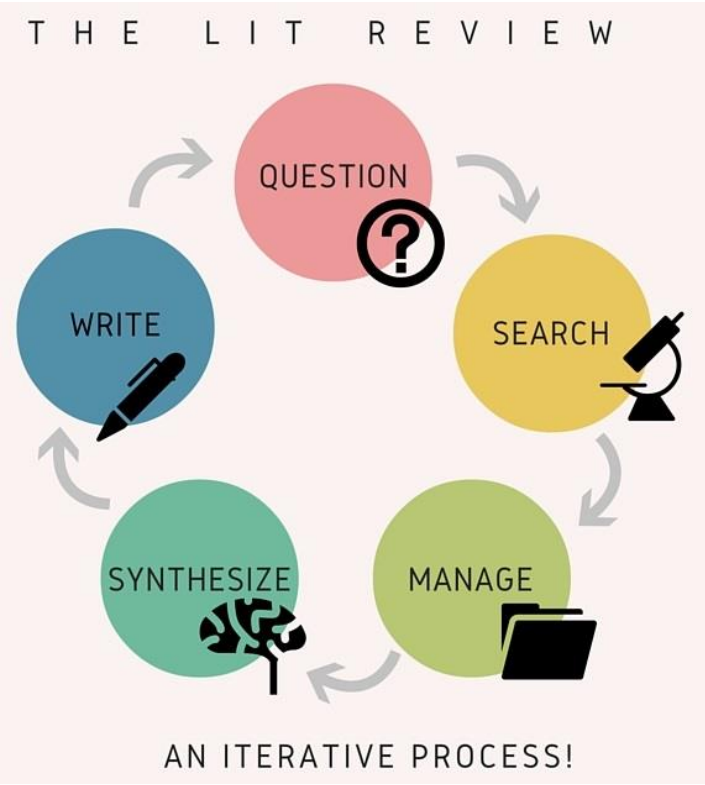
EXPLORATORY SEARCH TO IDENTIFY KEY IDEAS, STUDIES, AUTHORS

HOLLIS – the Harvard Library Discovery Tool

https://hollis.harvard.edu





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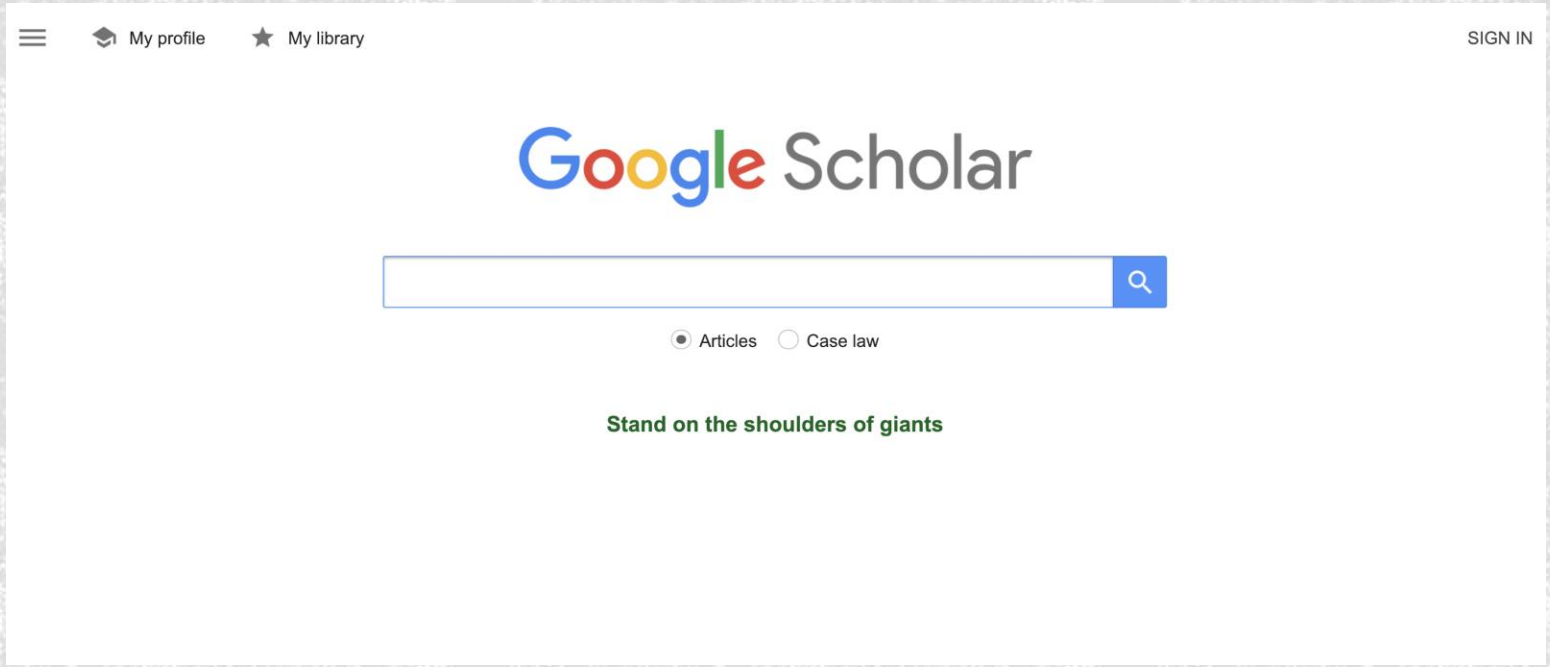
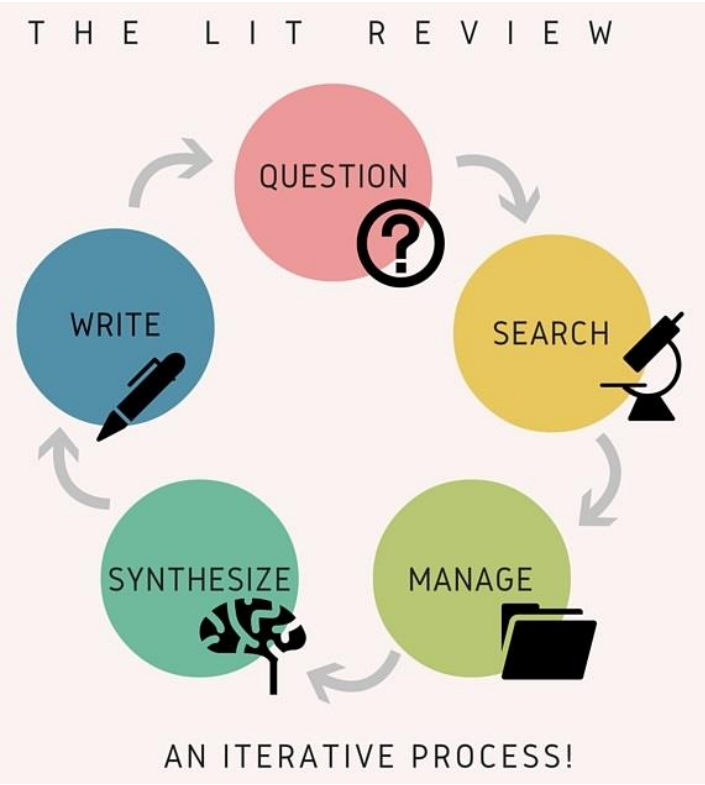
EXPLORATORY SEARCH TO IDENTIFY KEY IDEAS, STUDIES, AUTHORS

Google Scholar: https://scholar.google.com/





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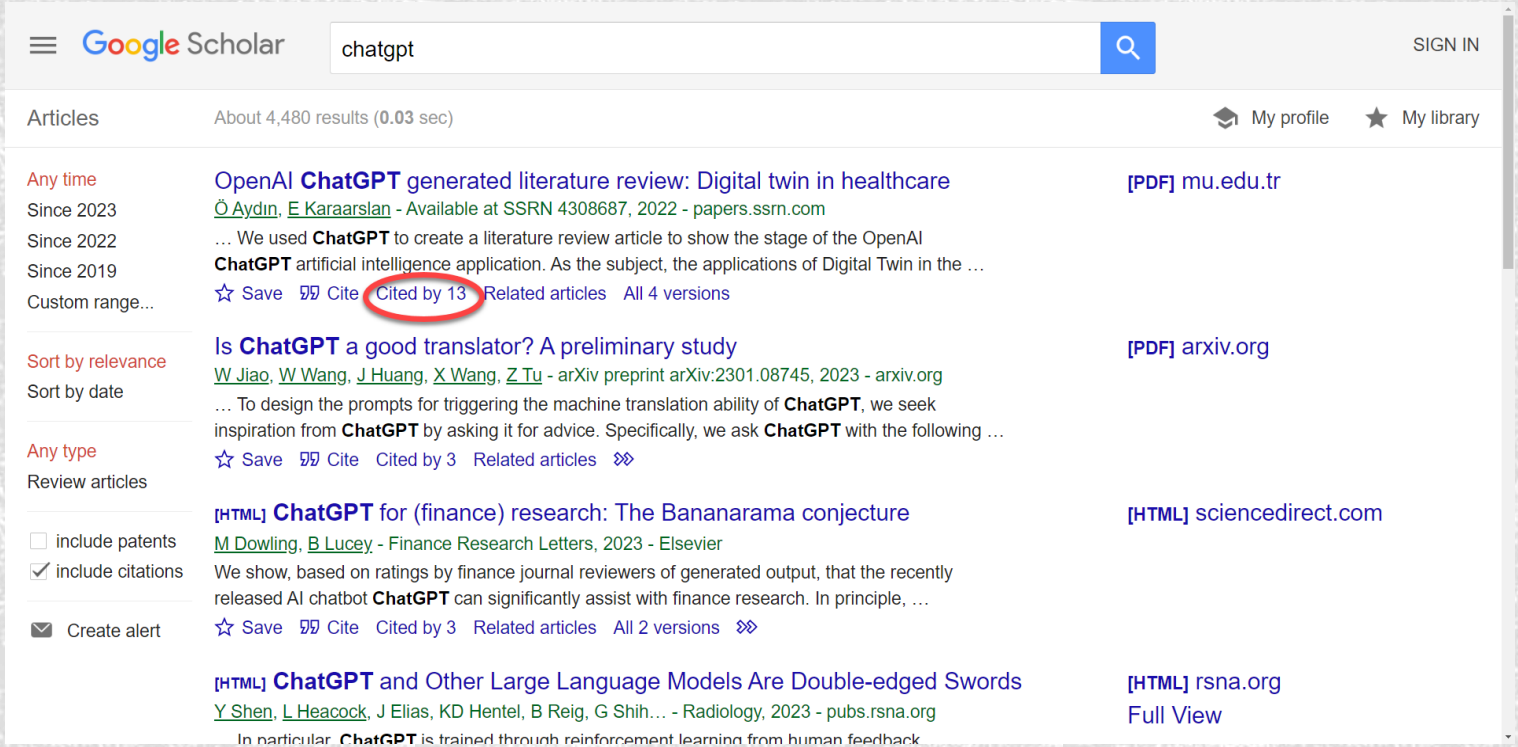
EXPLORATORY SEARCH TO IDENTIFY KEY IDEAS, STUDIES, AUTHORS

Google Scholar: **https://scholar.google.com/**

Access to fulltext articles via Harvard:

http://nrs.harvard.edu/urn-3:hul.eresource:gscholar



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MANAGING THE LITERATURE

Definition:
Research management includes three essential tasks: collecting, organizing, and citing.

Purpose:
Manage your research to prevent duplication of effort; retrieve what you need from what you've collected; facilitate synthesis and writing; and avoid inadvertent plagiarism.

Process:
Select a research management tool. Librarians at Harvard support EndNote and Zotero.

Develop a note-taking system matched to your research question.

Keep track of database searches.

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MANAGING THE LITERATURE

Consider the following ways to manage your literature:

- By themes, variables, issues.
- By varying perspectives regarding a topic of controversy.
- Chronologically, to show how the topic and research have developed over time.

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HOW MUCH IS ENOUGH?

The challenge is not to read everything, but to intelligently select what to read.

Breadth vs depth

- What you need to know in great depth
  - Any work done by direct competitors in the field
  - Any work that you use as a theoretical basis for your own
  - Any work whose methodology you have borrowed or adapted

It is useful; to look at each section and decide, "I don't need so much detail here", or "I really should include a reference to … here", because really this is the only way to judge whether you have "enough".

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SYNTHESIZE

Definition:
To synthesize is to combine two or more elements to form a new whole. In the literature review, the “elements” are the findings of the literature you gather and read; the “new whole” is the conclusion you draw from those findings.

Purpose:
Synthesize to draw conclusions about the findings in the literature so that you can identify how the literature addresses your research question.

Process:
- Gather literature that addresses your research question.
- Review literature and take notes: describe, summarize, analyze, and identify key concepts.
- Synthesize literature: compare & contrast, critically evaluate, interpret, so that you can draw conclusion.

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	THEME	SOURCE 1	SOURCE 2	SOURCE 3	SOURCE 4
SOURCE (AUTHOR, DATE)		Stark, 2016	Snow, 2013	Targaryen, 1999	Lannister, 2005
THEME 1	Intentionally integrated hands-on activities can help students better understand difficult and/or abstract concepts	Technology can be a way to incorporate hands-on activities into the classroom to help students dive deeper into a concept.	Focuses on the intentionality of hands-on activities, and how to design them in a way to be meaningful.	Learning by doing is more effective than learning by listening. Lecture based lessons that were supplemented by hands-on activites were more successful than those using lectures alone.	The author wanted students to have a practical experience to allow them to better learn a physics concept. By focusing on the end goal, the instructor was able to work backwards to design a meaningful activity that got the students engaged, and help them work towards the learning outcome in a step-by-step, intentional way.
THEME 2	Technology can enhance hands-on classroom experiences	Technology can be a barrier for some, but with scaffolding, clear goals, and guided instruction, technology can enhance the classroom experience. This paper provides an easy, low-barrier way for me to do so with a tool I can easily get access to.			Technology was used as a way to get students to collaborate and work together in the hands-on activities.
THEME 3 (Optional)	Hands-on activities can help foster student engagement	The study found that hands-on activities really helped students in various disciplines grasp different concepts. The case studies referenced support this, as do the results of the study.	Demonstrated that hands-on activities kept students engaged in the classroom, and led to less distractions.	The author was more successful in keeping students engaged when they were able to take a more active role in their learning.	

Librarian, A. a. (n.d.). Guides: Write a Literature Review: Synthesize. Retrieved June 17, 2019, from //guides.library.jhu.edu/lit-review/synthesize

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WRITE

Purpose:

Write a literature review to communicate your conclusions about how the literature addresses your research question. A well-written literature review reflects your scholarly accomplishment.

Preparation Tips:

- After synthesizing the literature, construct your argument or address your assignment.
- Review your notes and findings with your argument in mind.
- Create an outline that maps your argument.

Writing Tips:

- State your argument early.
- Indicate why your argument is important and how it contributes to the advancement of knowledge.
- Delineate the scope of your review by discussing what will and will not be addressed.
- Define terminology.
- Describe relevant theories and construct topic relationships.
- Properly cite studies used to advance your argument.
- Present your conclusions, their implications, and possible directions for future research.

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WRITE

Main Components of a Literature Review

1.Introduction
    1. Describe the topic and provide a basic definition.
    2. Parameters of the topic. (What does the topic include and exclude?)
    3. Why did you select the literature you did?

2.Body
    1. Historical background
    2. Definitions in use
    3. Mainstream ideas vs. alternative theoretical or ideological views
    4. Principle questions being asked
    5. Current research studies and discoveries
    6. Methodologies
    7. General conclusions

3.Conclusion
    1. Summary of agreements and disagreements from the literature.
    2. General conclusions.
    3. How does your thesis fit in?

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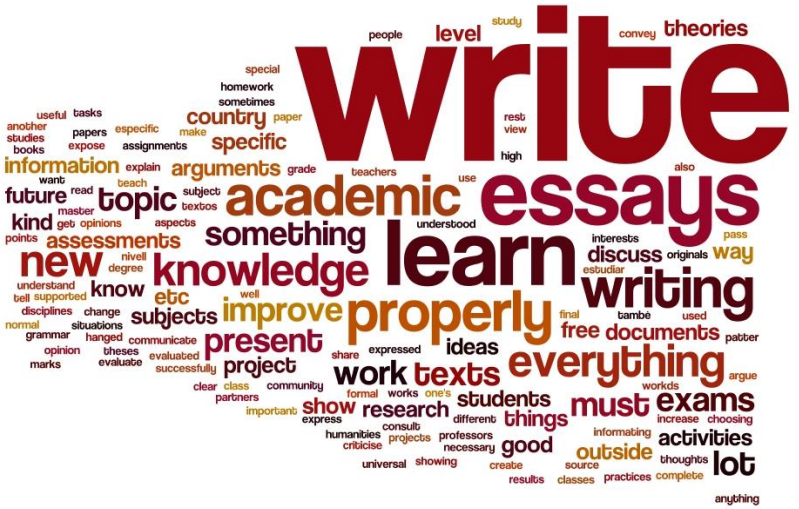
FINISHING

Do the best you can, and prepare to let it go.



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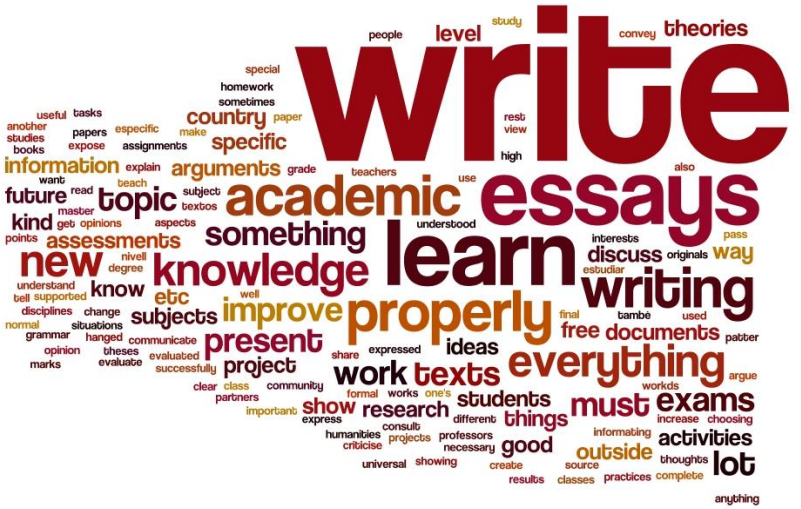
RESOURCES

- Literature Review - A Research Journal, Harvard Graduate School of Education

  https://canvas.harvard.edu/courses/32423/pages/literature-review-a-research-journey
- Notes on Note Taking Harvard University, https://hwpi.harvard.edu/files/hilt/files/notetaking_0.pdf
- Write and Cite, Harvard University Library, https://guides.library.harvard.edu/gsd/write
- Harvard Extension School Library Support and Resources

  https://www.extension.harvard.edu/resources-policies/resources/library-resources

Questions?



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