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College of Education Research Skills Handbook

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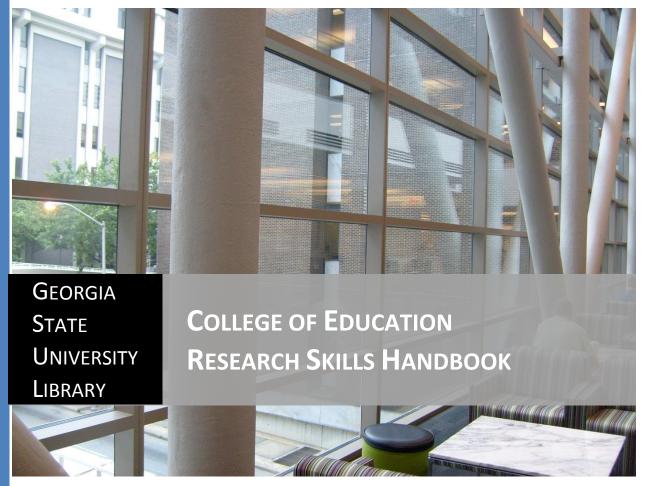


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Introduction:

This handbook will guide you through the process of gathering information and will provide you with resources to help improve your writing.

For additional assistance throughout the research process, please contact the Education Librarian. You are welcome to drop by, email, call, or set up an appointment for a consultation.

Education Librarian

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Get started with the following:

What Good Writers Know

General Research Guide

GALILEO online learning center

Tutorial: Five Steps to Better Research

Chapter 1: Organize, Cite, and Save

Organize

Organize from the beginning of your research. Keep up with where and how you are doing your research. This will make it efficient and thorough. Write down the database or other source and your search strategy. Or, use the search history feature in the database to save your searches. <u>Here</u> are instructions for saving your search on the EBSCO platform.

Create a working bibliography. A working bibliography means that you save the citation information for potential sources as you find them. As you go, you will eliminate sources that are less useful and add those that are more useful. You may want to create a folder for the files that you are eliminating just in case you need them later as your paper evolves.

Bibliographic software:

The library supports two bibliographic software products, Endnote and Zotero. These bibliographic tools allow you to easily collect and store citations, create notes for your citations, insert citations into your paper, insert your bibliography, and much more. Download these tools and find helpful instructions for using them at the following URLs:

Zotero (free for everyone)

Endnote (free for you)

The 3X5 Notecard Method:

The 3X5 notecard: Create source cards with the complete citation for each source. Number these cards, so that you can use the number to indicate the source when you begin taking notes. Or, you can include the citation information on each note card containing notes. Use one note/idea per note card. Later, you will organize your cards by concepts to help in the writing process. Paraphrase and use quotation marks when writing down direct quotes.

Style Guides:

A Quick Guide for Styles

<u>APA style guide</u>: Publication manual of the American Psychological Association- BF76.7 .P83 Located at the Research Support Desk, Library North 1

The Basics of APA style: Basic tutorial from the American Psychological Association for using APA style

<u>The Chicago manual of style</u> : Z253 .U69 2010 (16th edition) Located at the Research Support Desk, Library North 2. Also available online <u>here</u>.

OWL (Online Writing Lab) Purdue

KnightCite

Storing and backing up your info:

Use your GSU <u>OneDrive</u> account for storage and collaboration. OneDrive is part of the Outlook Office 365 suite of tools.

Other methods: Email it to yourself, print it, save it to the <u>cloud</u>, or a flash drive, etc. In fact, choosing more than one method is best. Just be sure to find some reliable way to back it up.

Cloud storage:

The cloud allows you to store files off-site so that they can be accessed from anywhere. Cloud storage often includes options that allow for collaboration. Many companies offer cloud storage. Here's a few:

<u>Google Drive</u>: At least 15 GB of free storage between Google Drive, Gmail, and Google+ Photos; permits real time collaboration and editing

Drop box: 2GB of free storage; offers file syncing

iCloud: 5GB of free storage; seamless app integration to sync everything for you

Chapter 2: Selecting a topic

1. Think about your assignment and/or your audience.

Know your assignment

Be sure you know what type of paper you are writing and what requirements you need to meet for your paper. Different professors may have different requirements even when you are writing the same type of paper.

Know your audience

More on <u>audience</u>

- Sources for topic ideas
 - Talk with teachers and colleagues
 - Browse journals in your subject area
 - Look for issues in newspapers/newspaper databases

Two databases that help with topic ideas:

- Issues and controversies
- <u>CQ Researcher</u>

2. Brainstorm

Common brainstorming techniques:

Free writing: You can use free writing to come up with a topic or expand on a topic you already have in mind. In fact, you can use it throughout the writing process. To free write, get some blank pieces of paper (or use a word processor) and write as fast as you can non-stop for a few minutes. Try five minutes. The point is to get the ideas flowing and not to judge what you are writing down. Don't worry about grammar, spelling, or organization. Just write.

Mind mapping: Start with one or two words or concepts. Write them in the center of the page. Work outwards in all directions writing related words. Use shapes, circles, arrows, and other visuals to create boundaries and connections.

Try this: Mind mapping application tool

Once you finish the brain storming exercises, you can look over what you've written to find keywords, concepts, or ideas that can be used or connected for your topic. These are the words that you will begin with when you are building your search strategy.

More on brainstorming

3. Formulate questions about your topic that connects ideas and concepts.

For example: How is the educational system influenced by politics?

Choose the words in your question that identify the main concepts. In this question, the keywords are education AND politics. These are the search terms you will type in.

4. Test your topic to find out if it is too broad or too narrow. (See basic search strategies)

- Search for background information
- Find books with a <u>library catalog</u> search
- Find articles using the Discover search tool on the <u>library homepage</u>

5. Refine your topic or choose a new one if needed. If you find too much information, you may want to narrow your topic. Think about specific aspects of your original topic. Go back to your brainstorming for ideas or brainstorm again. During this process, a topic like: *education AND politics* can become: *Learning AND standardized testing*

More on topics:

From Topic to Research Question

Narrowing a Topic

Chapter 3: Developing a thesis

Before developing your thesis, you will have explored some resources to become familiar with the issues and previous research on your topic. Think about what you have learned during your initial research and begin to ask yourself questions.

- Start with who, what, where, how, when.
- Think of questions that your paper could support that would be interesting to you and your readers.
- Make sure that you have resources available to you that will support your thesis.
- When developing your thesis, think about how long your paper needs to be and whether or not your question can be answered in the required number of pages.

More on developing a thesis

Chapter 4: Selecting the types of information you need

Flow of information:

The flow of information will give you clues about what research already exists and what research still needs to be done. It will also give you clues about where to look for the information that you need. For instance, if you are writing a paper about an event that happened this week, you will not find scholarly articles about that specific event just yet because it takes much longer than a week for a scholarly article to be written, peer-reviewed, and then published. Newspapers and web sources are good starting places for this kind of information. You may find scholarly articles about similar events or related subject matter that occurred at least six months ago in scholarly articles.

Timeline	Where it's reported	Some ways to find that information
Seconds / Minutes	RadioTelevisionInternet News Services	Web Search Tools, Radio, TV
Day / Days+	Newspapers	Newspaper Source, Factiva, LexisNexis Academic
Week / weeks	Magazines	Magazine Indexes
Six months +	Journals	Periodical Indexes; Bibliographies; cited references
1+ years	• Books	GIL Library Catalog; Bibliographies; GIL Universal Catalog; Worldcat.org
Average 10 years	References Sources:EncyclopediaHandbook	GIL Library Catalog; Reference Sources; Bibliographies

[Adapted from the <u>USG Online learning center</u> (accessed March 12, 2012) who adapted their version from the UCLA College Library (accessed April 4, 2001) which was adapted from Sharon Hogan's original Flow of Information conceptual approach to library instruction 1980 by Diane Zwemer, Instructional Services Coordinator, UCLA College Library.

Primary and secondary resources

Primary sources relate an event that was experienced firsthand. Some examples are diaries, interviews, and creative works. Other examples include statistics and results of experiments.

Secondary sources analyze or interpret primary sources. Some examples include textbooks, literature reviews, and biographies.

How a resource is used can also influence whether or not a source is considered primary or secondary.

For example: John Doe wrote the book, A Biography of Jane Smith.

The book is a secondary source if you are seeking information on Jane Smith. It is secondary because John Doe is interpreting the life events of Jane Smith. However, if you are seeking information on the writing style and thought processes of John Doe, then this is a primary source. This instance is primary because the writing itself is a firsthand account of John Doe's writing style and thought processes.

Another example: A newspaper article that reports on a study is a secondary source because the author of the newspaper article did not conduct the study. One thing to keep in mind is that the authors of newspaper articles are typically generalists. So, they are not usually experts in the field for which they are reporting. Additionally, newspaper articles have to get by an editor, but they do not undergo peer review. So, if you are citing a study in your academic work, you should find the original study (which is a primary source) and evaluate it for yourself as a scholar. This will give you a first-hand account of the study rather than relying on a journalist's interpretation of the study.

More on primary and secondary sources

What is peer review?

Peer-reviewed (scholarly) articles are reviewed by scholars and other experts in the field before being approved for publication. This helps to ensure the integrity of the article.

Tutorials: Scholarly vs. Popular Articles ; How to Find Scholarly Articles

Scholarly journals vs. Popular journals vs. Trade journals

Here are some descriptions to help you determine the difference between these types of sources:

Popular:

- Written in a language that is easy to understand
- Relatively short
- Usually contains photos
- Usually written by magazine/newspaper staff
- Contains advertisements
- Rarely contains a bibliography

Trade:

• Most are not peer reviewed; some are (The ones that are blur the boundaries between trade and scholarly journals.)

- Written for people in a particular field or industry
- Authors are specialists in a particular field or industry
- Contains photos
- Contains advertisements that target those who work in the magazine's targeted field

Scholarly (Peer-reviewed):

- Peer-reviewed: undergoes a process where the material is evaluated and approved by other scholars in the field before being published
- Written by scholars in the field
- Written in a language for the academic community
- Contains a complete bibliography

You can usually select the "Scholarly-Peer-reviewed" option when searching in databases. Another way to find out whether or not a journal is peer-reviewed is to consult <u>Ulrichsweb</u>.

Newspaper articles are often useful during the research process. Newspaper articles are not peer-reviewed. Editorials and book reviews are also not peer-reviewed even if you find them in a peer-reviewed journal.

More on scholarly, popular, and trade journals

Types of scholarly articles:

There are many types of scholarly articles. I've highlighted a few types of articles below:

Literature Review: A literature review gathers, summarizes and synthesizes scholarly literature as it relates to a particular topic. It often contains countering points of view and evaluations of the literature that it includes. It may reveal recurring themes or gaps in the research.

Example: Simonson, M., Schlosser, C., & Orellana, A. (2011). <u>Distance education research: a review of the</u> <u>literature</u>. *Journal of Computing in Higher Education*, 23, 124-142.doi: 10.1007/s12528-011-9045-8

More on literature reviews and how to write them

Empirical Research Articles: Empirical articles contain original research. You may be able to tell that the article is empirical from the title or abstract, or you may have to scan the article to know if it is empirical. Empirical articles include the following components: abstract, introduction, method, results, discussion, references. However, each of the sections may not be labeled.

Example: Chen, S. Y., & Liu, X. (2011). <u>Mining students' learning patterns and performance in Web-based</u> <u>instruction: A cognitive style approach</u>. *Interactive Learning Environments*, *19*(2), 179-192. doi:10.1080/10494820802667256

More on empirical articles

Case Study Research Articles: A research study involving a person or a small group. It studies a particular situation or event in detail.

Example: Thompson, C., Hardee, S., & Lane, J. C. (2011). <u>Engaging student diversity through a Social Justice</u> <u>Learning Community</u>. *Journal Of Diversity In Higher Education*, 4(2), 106-119. doi:10.1037/a0022726

Meta-Analysis: A research study using statistical analysis and quantitative data from previous research studies.

Example: Rubin, M. (2012). <u>Social class differences in social integration among students in higher education: A</u> <u>meta-analysis and recommendations for future research</u>. *Journal Of Diversity In Higher Education*, *5*(1), 22-38. doi:10.1037/a0026162

Field study: A research study conducted in the field or natural environment

Example: Hatcher, B., & Squibb, B. (2011). <u>Going outside in winter: A qualitative study of preschool dressing</u> routines. *Early Childhood Education Journal*, *38*(5), 339-347. doi:10.1007/s10643-010-0415-z

More on types of scholarly articles

Many scholarly articles include some type of study. The research within a study is often described as using either qualitative data or quantitative data. In qualitative data, descriptions about the character or the nature of something are described. Qualitative data can be gathered with interviews, observations, and other types of interactions. Qualitative data can be coded and then expressed as quantitative data. Quantitative data uses numbers or statistics to describe things.

Hint: You can use the words qualitative or quantitative as keywords when looking for articles about that type of data. Or, you may need different words to describe what you are looking for such as interviews, Grounded Theory, SPSS, etc.

Chapter 5: Searching Strategies

Background information

If you don't already have a handle on the general background information for your topic, try using an encyclopedia or specialized dictionary. The background information will give you an overall sense of your topic and will help you find some direction for building your search. The more you know about your topic, the easier it is to search.

Try the reference collection on the second floor of Library North:

- The New Encyclopaedia Britannica, Ref. AE5 .E363 2005
- Encyclopedia of Education, Ref. LB15 .E47 2003
- Encyclopedia of Special Education, Ref. LC4007 .E53 2007
- World Education Encyclopedia: A Survey of Educational Systems Worldwide, Ref. LB15 .W87 2001

Browse the LB and LC section of reference books in the reference section on Library North 2 for more subject specific and specialized material.

Check the library catalog for other resources. You can use a basic search strategy to find books in the library and to search for articles and other materials with the Discover search tool.

Basic Search Strategy:

- It's usually best to start fairly broad (but not too broad) and narrow later. With this method, the database tools will provide ideas about how to narrow your search.
- Use keywords. Most catalogs and databases do not search well with the kind of natural language searching often used with search engines like Google.
- You can enter a single word or concept for a basic search. When entering more than one keyword word or concept, use the Boolean operators: AND, OR, NOT.

Boolean Searching:

Most searches require more than one word or concept. Here's how to connect your search terms with Boolean operators:

Use the word AND (in all caps) to connect keywords and narrow your search:

Education AND Politics

Use the word OR (in all caps) to broaden your search. "OR" is often used for synonyms.

Literacy OR Reading

Tutorial: Boolean searching

You can use basic search strategies to search the library catalog, perform a journal title search, or use the Discover search tool.

Search the Library Catalog for Books, Journal Titles, DVDs and more

The library catalog provides brief information about books, videos, audio recordings, journal titles, and other library holdings. Use the catalog to find the call number and availability of a physical item located in the library. You can also use the catalog to search for ebooks and some digital music. You can search for journals and newspapers but not for specific articles within journals or newspapers. If you search for a specific journal or newspaper, the catalog will tell you if the journal or newspaper is available in print and/or online. If it is accessible online, a link to the database(s) will be provided.

Tutorial: Searching the GSU Library's GIL catalog

Journal Title Search using the Journals tab:

Sometimes you may want to search in individual journals or newspapers. The instructions below indicate the most reliable way to find out whether or not the GSU library has access to the journal or newspaper that you need:

- 1. Go to the <u>University Library home page</u>.
- 2. In the main search box area on the left, Click on "Journals". It's the third tab from the left.
- 3. Enter the journal title. If you want to limit to electronic journals, you can click the button for "E-journals ONLY." 4. Click on GO.
- 5. If you limited to electronic, then the journal title will be displayed in red. Click on the journal, listed in red.
- 6. A list of databases that cover that journal title will appear. The date range for coverage is listed, so consider that when selecting your database.
- 7. The search interface is a little different for each database, but most databases let you browse and search for specific terms.

The Discover Search Tool:

Tutorial: Using Discover

Discover is the default search box for the library homepage. This search tool searches most of the libraries collections in all formats. It searches catalog records for print materials and online full text materials. This tool is great for quick searches in a variety of formats. It might also help you find sources you might have missed, and it may help you discover interdisciplinary material. The search will yield possibly a million hits. So, for a more focused search, try using our research guides to find a database specializing in your subject area.

- Education Related Research Guides
- Or, to find subject specific database recommendations, click on "Go to Databases by Subject" in the main search box area of the <u>library homepage</u>.

Locating Journals in your field:

- One of the best ways to find journals in your field is to do a web search for associations in your field. Then, look to see if the association publishes journals. For example, the website for the American Educational Research Association includes a tab for publications. They have many types of publications, so I have to click the tab and then choose *journals*. Under the journals section, I see the names of six journals that they publish.
- You can do a <u>library catalog search</u> to find out what journals the library owns that are related to your field. This will pull journal titles but not individual articles. Type in a search like Education AND Music in the catalog search box. When the search opens, limit to journals on the left. I got 43 results with <u>this search</u>. This type of search includes both print and electronic titles. For the electronic titles, you can click a link to be directed to the online journal and search the journal from there.
- Most of the time you will use a database to locate journal articles. Databases search hundreds of journals at once and are often a more efficient way to cover the literature than searching individual journals. When you do this, you can take note of the journals that pop up in your search results.
- You can browse all of our current print journals on the 3rd floor of Library North. Current print journals are
 mixed in with the bound periodicals by call number. You'll at least want to know the call number area that
 you're looking for. For the most part, education is listed in the L call number area, but if you want something
 like music education, then that will be listed in the ML call number area. Here's a link to the Library of Congress
 Classification information: http://www.loc.gov/catdir/cpso/lcco/

Advanced searching:

You may need to try a more advanced search strategy if you don't get any results or if you don't get enough relevant results with a basic search strategy.

- If you are not getting any results, check your spelling (Databases can be persnickety about spelling.)
- Think about the language of your discipline and brainstorm synonyms or related terms.
- Try subject searching within the database. You can choose "subject" from the drop down menu beside the advanced search boxes in most databases. Subject searching can focus your search so that your search results are more relevant. Most databases use a controlled vocabulary specific to that database for subject searching. This means that the search term you enter must be one of the terms used by the database to classify the information. Most databases have a thesaurus so that you can look up the subject terms used by that particular database. If you do a "subject" search with a term outside those contained in the thesaurus, you will get zero results.
- If you can think of any keywords that pull up some kind of result, most databases offer subject categories or suggestions as limiters or expanders. Check your facets to see what the database offers that might help you.

Databases often have features to help you search similar words or phrases

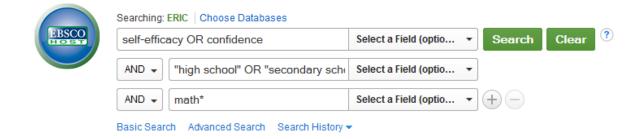
Note that databases are not all searched the same way. You may need to consult the help section of your database to find out what types of features the database supports. These are the most common methods:

- Use quotations to "search a phrase"
- Use the star sign to truncate a word* (So, educat* will pull educate, educates, education, etc.)

Tutorial: Searching effectively using truncation

Building an advanced search with multiple Boolean operators

Simple searches with two to four keywords may be all that you need for your research. However, most databases offer more advanced searching options. When you choose the advanced search option, the database helps you build the search string. However, it is best to know how the database is processing the search. For example, in EBSCO, the advanced search option defaults to three different lines that you can connect with AND, OR, or NOT as demonstrated below.



Each line in the search box acts as a parentheses that is processed together. If you click the "search history" option, you will see how to write out this search string for use in a single search box if you choose.

(self-efficacy OR confidence) AND ("high school" OR "secondary school") AND math*

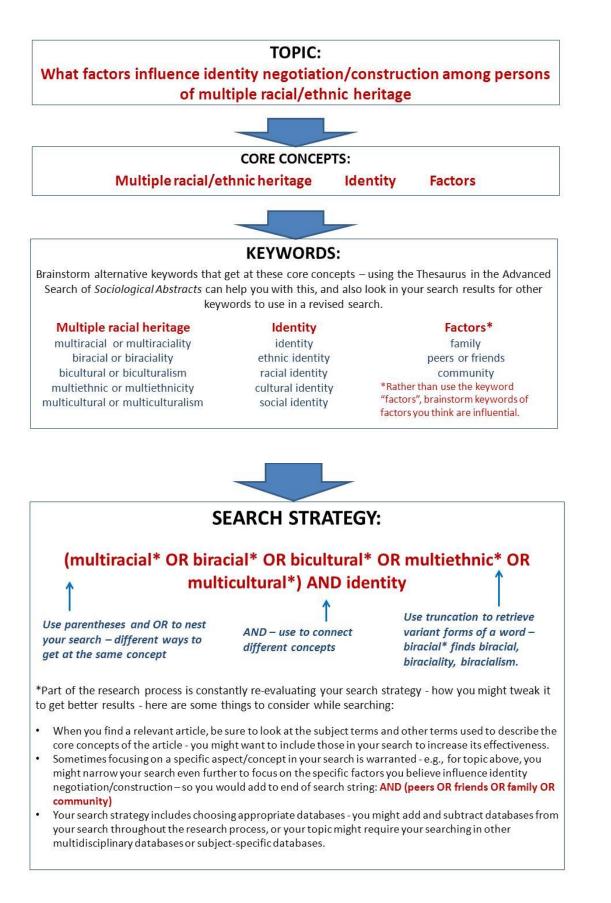
You can paste the above search string into a basic search box and get the same results that you would by building the search under the advanced option. Keep in mind that this search will mean something very different if I move the parentheses around.

- Tutorial: Advanced Boolean Searching
- Tutorial: Basic Search Tips and Advanced Boolean Explained

Moving from a Research Question to an effective Search Strategy

The section *Moving from a Research Question to an effective search strategy* is copied in whole or in part from Mandy Swygart-Hobaugh's <u>SOCI 3020 Social Research Methods</u> research guide. CC BY NC

Moving from a Research Question to an effective search strategy involves breaking down a research question into its core concepts, brainstorming keywords, and then constructing an effective Search Strategy using Boolean operators, nesting, truncation, and phrase searching. Below is an example - and then you can use the <u>Search Strategy Builder</u> tool for your own topic.



Now, I can copy and paste this Search Strategy into the database search field: (multiracial* OR biracial* OR bicultural*) OR multiethnic* OR multicultural*) AND identity

Citation tracking as a search strategy

Many databases offer a citation tracking feature. You may see terms such as "cited by" or "cited references". Citation tracking is used for various purposes. One purpose is to measure the impact of a journal or an article in the field. If an article is frequently cited by other articles, then it is probably making an impact on the field. Another reason to use citation tracking is to find relevant articles on your topic. You may hear the concept referenced as bibliographic mining or cited reference searching.

Tracking back (You will find older articles. Sometimes this is called bibliographic mining.)

One common method of locating articles about a topic is to find an article that is relevant. Then, look at the bibliography for that article. You may find other relevant sources within the bibliography. That method is likely all you need. You can take this concept further if you want. You can find articles that cite the articles in your bibliography using citation tracking options. You can then track those articles backwards or forwards. You can look at the end of the article to see the bibliography and then look up relevant articles individually. When available in EBSCO, you also have the option to click on "cited references" underneath the item in the results list in order to see and link to the bibliography sources. This is an easier way to get to the full text of sources listed in the bibliography.

Here is an example of an item record for a keyword search *Calibration of comprehension* in the PsycINFO database:



In this example, *cited references (16)* refer to the items listed in the bibliography for the article, "Constraining factors in calibration of comprehension". This article contains 16 items in its bibliography. If I click on the "cited references" option, I will see the list of 16 items with links to the full text when available. Since these items are in the bibliography, the dates on the articles will be older than March, 1990 our published date, so you are tracking back in time from the publication of the article in question.

Note: In some platforms such as Web of Science, "cited references" means future publications rather than the bibliography. The date on the publications in your results will let you know if you are traveling forward or backward in time through the research.

Tracking forward (You will find newer articles.)

This is usually called "cited by". This feature allows you to see articles that cite a particular article. The new article that you retrieve might have the same "cited by" feature allowing you to follow the research forward in time. The new article will also have a bibliography that can be tracked backwards in time.

Here is the PsycINFO database example again:



Now, if I click *Times Cited in this Database (60*), I will see a list of 60 newer publications that cited "Constraining factors in calibration of comprehension." By newer, I mean that the dates on all of the *cited by* articles will be newer than the Mar, 1990 publication date of our article in question. Thus, we are tracking the research into the future from the publication of our article in question.

More on citation tracking

Not all databases offer citation tracking. Tracking forward is limited to the database or the vendor's group of databases that you are searching.

In EBSCO databases, the citation tracking option is only available in certain databases and only available when you search the EBSCO databases individually. If you select multiple databases in EBSCO, the citation tracking options disappear. The options will appear for databases in EBSCO that offer the feature when they are searched individually. There are two ways to access citation tracking info in EBSCO. Look for it underneath the title and abstract in your results list. If it is available, it will appear. When listed below the title/abstract, "cited references" means bibliography. "Times cited in this database" or "cited by" means forward tracking. The second way to access citation tracking options is to look to the blue navigation bar at the very top of the database. You will see "cited references" or you may need to click "more" to see the "cited references" option. When you access "cited references" in this main navigation bar, it is not a reference to the bibliography. In this context, you will have several tracking options such as "cited author" or "cited title". If you enter the title of an article, you will be tracking forward. There are other tracking options here. When tracking article titles, just be sure to take note of when you are looking at the bibliography and when you are tracking forward. The publication years listed in the citation of the articles that you retrieve should give you a clue.

Keep in mind that you are searching databases individually and that different databases have access to different resources. This means that if you search the same article in different databases, you are likely to get different results. For instance, Academic Search Complete offers forward citation tracking when available ("cited by" or "times cited in this database"). It will track articles available in Academic Search Complete but not in other databases. So, if you track an article title in Academic Search Complete and then track the same article title in PsycInfo, you are likely to get different results. For the most comprehensive results, track the article in more than one database.

- There is no comprehensive source for citation tracking.
- Web of Science is a very good source for citation tracking. When you use citation tracking features in Web of Science, it tracks the article in all databases within Web of Science. So, this feature is easier to use in Web of Science than in EBSCO.
- Google Scholar is likely the most comprehensive source for citation tracking in Education at this time. Unlike many other databases, Google Scholar also tracks book publications. Google Scholar is not perfect as it does not have access to all publication information.
- When using any citation tracking tool, check for name consistency. The tool might retrieve authors with similar names or omit authors whose names are slightly inconsistent when they publish. You will likely also find other inconsistencies.

Here's a brief tutorial for another way to do citation tracking in the EBSCO database, CINAHL: <u>CINAHL EBSCO 2.0 Cited</u> <u>References Search</u>

Chapter 6: Evaluating your resources

There are many ways to evaluate information. In this chapter, we will focus on relevancy, credibility, and quantitative and qualitative factors.

The quick scan: Evaluating results for relevancy

You've used your search terms to retrieve some results in a library database. Now, scan the titles and abstracts to see if they are relevant. If you don't find what you need, or if you've notice that there are too many unrelated results, then you may need to alter your search.

- 1. Quick scan your results: The first time through, you likely only need to look at the title and abstract or table of contents to see if the item is relevant
- 2. Detailed scan: Once you gather what you think might be relevant, scan the resource again looking more closely at the introduction, structure, charts or other eye catching content, and the conclusion. You might eliminate more resources during this process, or you might even discover that you need to add more resources.
- 3. Read the resources more thoroughly.
- 4. Continue reading as you work while taking notes. You may still eliminate or add resources. Research is cyclical.

Tutorial: How to read a scientific article II

Tutorial: How to Read a Scholarly Journal Article

Altering your search for relevancy:

Once you have performed an initial search, many databases offer suggestions in an area or column near your search results to help you limit your search or expand your search on a related topic. This is most helpful if you don't know exactly what you need, and you want the database to make some suggestions for you. These suggestions are often called facets. Facet options are often based on your initial search terms. Sometimes, clicking on the facets will give you what you need. However, since the facets are often based on your original search terms, you may need to brainstorm your search terms for synonyms, broader terms, or narrower terms for better results.

Many databases offer advanced search options for more precise searching. This is usually better if you know exactly what you want or more about what you want. Look for limiting options in the advanced search area. These limiters vary by database. Depending on the database, you may be able to limit to article type, methodology, population, date, or other factors.

The C.R.A.A.P test: Evaluation Results for credibility

When evaluating a resource for credibility, consider the following:

Currency Reliability Authority Accuracy Purpose/Point of View The C.R.A.A.P. test was created by the Meriam Library at California State University, Chico. View it here.

More on evaluating sources in general:

Evaluating Sources

Critical Evaluation of Information Sources

For more detailed information about evaluating educational research, try the following sources:

Understanding and evaluating educational research: Library North 4: LB1028 .M366 2010

An education research primer: how to understand, evaluate, and use it: Library North 4: LB1028 .L29 2006

Evaluation using qualitative criteria and citation analysis

Qualitative Criteria

Sometimes, it is more valuable to evaluate a journal in a qualitative way. Oftentimes, evaluators use both qualitative and quantitative criteria.

Check <u>Ulrichsweb</u> for detailed information about the journal that you are considering including:

- Who publishes the journal?
- How long has the journal been in publication?
- Who (how many vendors) index the journal (This will influence how findable your article is.)
- You should see a link to the journal website.

(Note: Not all journals are listed in Ulrichsweb)

Journal website: Does it look professional and include information that is expected of a professional journal such as:

- Is it peer-reviewed? If so, is the peer review process explained?
- Is the acceptance rate listed? (Oftentimes you have to email the editor for this info.)
- Does it list the members of the editorial board? If so, who are the members/where are the members from?
- Look over the published articles. What authors/institutions are publishing in this journal? Do the articles appear to be professional/well written?

Citation Analysis:

Top Journals/Citation Analysis

One way to help determine the importance of an article, author, or journal in the field is to analyze the number of times that an article, author, or journal is cited. The process for doing this is known as citation analysis. The idea is that if an article, author, or journal is highly cited by others, then it must be making an impact on the field. The most highly cited authors, articles, or journals are likely to be the top/most well known in their field.

Limitations

Citation analysis is a standard practice, and it is widely accessible with tools such as <u>Google Scholar Metrics</u> and <u>Journal</u> <u>Citation Reports</u>. However, the tools used in citation analysis all have limitations. Using multiple tools and comparing results can offer a better perspective of value within a field. Citation analysis should be a factor in determining value, but it should not be the sole factor. As scholars, it is important to evaluate articles, authors, and journals on their own merit as appropriate.

Additionally, the Impact Factor can be manipulated. Here's one blog about it from Nature.com, the publisher of Nature magazine:

New record: 66 journals banned for boosting impact factor with self-citations

When using citation analysis, it is important to note that the measurements are only meaningful within a given field. So, comparing education related analysis to physics related analysis is not meaningful. There are many measurements available, but the two most common are known as the impact factor and h-index.

Impact Factor

The Impact Factor is an algorithm for measuring the number of times that a resource is cited within given years. Higher numbers indicate more citations. More information about how the impact factor is calculated and how it should be used can be found <u>here</u>.

The h-index

Traditionally, the h-index measures the influence of an author in the field. More recently, variations of the h-index have been developed to measure other factors such as the influence of a journal in the field. So, check the tool you are using to be sure about what your measurements are indicating.

The h-index originated with J.E. Hirsch. Here's his article about it: <u>An index to quantify an individual's scientific research</u> <u>output</u>

The platform, Web of Science, is known for its citation analysis tools. Coverage of education related materials through Web of Science has improved over the years. However, many education journals are not covered within Web of Science. Web of Science citation tools only pull citation information available through Web of Science. So, coverage is not comprehensive.

Tutorial: What is Cited Reference Search (Web of Science)

Tutorial: Web of Science: Citation Report

Tutorial: How to do a cited reference search (Web of Science)

For more information and more citation analysis tools, see the <u>Scholarly Impact Tools</u> research guide.

Chapter 7: The Web vs. the Library

The web contains powerful tools for locating research. Oftentimes, researchers start with the web because it is the most familiar tool for them. However, there are times when the web is the best place to start, but other times; the library is the best place to start. For comprehensive research, you will use both the web and the library and possibly other resources as well. Where you need to start really depends on your research question and/or research needs. This chapter will offer a few suggestions and other information to help you decide where to start.

Start with the web when you need websites, blogs, social media, some background information, some open access content, and other content that you don't mind spending time to evaluate.

Start with the library when you need to find peer-reviewed articles, newspaper articles, studies, literary criticism, book reviews, vetted information, or when you need to have more control over your search results.

<u>Google Scholar</u> is a powerful academic research tool on the web. However, keep in mind that there are few options to limit your search, and not all content is scholarly in the sense of peer-review.

If you have not already linked Google Scholar with the GSU library, here's how:

Once Google Scholar opens, click *settings* and then click *library links*. Start typing in Georgia State University into the input box, and it should appear in a list. Select, *Georgia State University – Full Text @ GSU*. Then click *save*.

Google				
Scholar Settings	Save Cancel			
Search results Languages Library links	Show library access links for (choose up to five libraries): Q Georgia State University Q e.g., Harvard Augusta State University - Full Text @ ASU Fort Valley State University - Full Text @ FVSU Georgia College & State University - Find It @ GCSU Georgia State University - Full Text @ ASU Find It @ GCSU Georgia College & State University - Find It @ GCSU Georgia State University - Full Text @ GSU LITC Georgia College and State University - Full Text @ GCSU GCSU			
	Online access to library subscriptions is usually restricted to patrons of that library. You may need to login with your library password, use a campus computer, or configure your browser to use a library proxy. Please visit your library's website or ask a local librarian for assistance.			

To retain settings, you must turn on cookies

Once you have set the GSU library up in Google Scholar, you can click more to access the Find it@GSU option. This option will search the GSU databases.

Motivation and affect in REM sleep and the mentation reporting process MR Smith, JS Antrobus, E Gordon, <u>MA Tucker</u>... - Consciousness and ..., 2004 - Elsevier Although the emotional and motivational characteristics of dreaming have figured prominently in folk and psychoanalytic conceptions of dream production, emotions have rarely been systematically studied, and motivation, never. Because emotions during sleep ... Cited by 32 Related articles All 6 versions Web of Science: 13 Import into BibTeX Save

Sleep health, lifestyle and mental health in the Japanese elderly: ensuring sleep to promote a healthy brain and mind

H Tanaka, S Shirakawa - Journal of psychosomatic research, 2004 - Elsevier ... Thus, on both the subjective mental and physical condition assessment sheet and in postinstruction objective indicators such as actigram and physical strength measurements and computer tasks improvements were seen in **sleep**, **motivation**, daytime mood and physical ... Cited by 68 Related articles All 9 versions Web of Science: 28 Import into BibTeX Cite Save Find It @ GSU Fewer

The chart below compares the features of Google Scholar, the library's Discover search tool, and a typical subject specific library database:

Google Scholar	Discover Search Tool	A Typical Subject Specific Library Database
 Indexes individual articles/items; not journals. There's no list of what is covered. (Such a list in this context is likely to be very impractical.) Even though you can add your school under settings, it's not always clear about what you have full text access to. Don't pay for articles. Double check the library databases and/ or request through ILL. 	 Secures permission from each publisher to index. So, complete coverage of each listed database may not be available. Similar to a Google Scholar search for content owned by your library. It sometimes includes other content from the web. Coverage varies by school. Includes a limit to full text option for quick easy access to the full text of content 	 Indexes journals and other materials. Publishes selection criteria. Publishes coverage list. Thus, content is defined and consistent. For example, the content that is indexed within PsycINFO is the same all over the world regardless of platform. (Whether or not access to the full text is available at your institution varies greatly. Also, search strategy varies by platform.)
 Uses machine crawling to discover and index content all over the web. Google Scholar cannot crawl in all places, so the library is likely to have content that is not discoverable by Google Scholar. 	 Discover at GSU searches about 80% of everything owned/subscribed-to by the library in all formats. This includes individual articles, books, special collections, etc. Searches within the full text when available. Limiting to discipline is available, but it is beta right 	 Most databases contain content gathered in relation to a single discipline. Uses subject terms produced by scholars in the field to organized content. For example, subject terms in PsycINFO are provided by the American Psychological Association. Subject terms in

	 now. Overall, the tool is not very focused, so it can be more difficult to do comprehensive research with this tool than with subject specific databases. 	 Medline are provided by the National Library of Medicine. Indexers/Scholars in the field assign individual articles to the subject area.
 No filter for peer review. You can look up journals in <u>Ulrichsweb</u> to see if they are peer-reviewed. Offers a few other filters and an advanced search option that is less robust than most library databases. 	 Peer-review filter and many other filters not available in Google Scholar. Offers advanced search. 	 Most provide a filter for peer- reviewed content. Some contain only peer- reviewed content. Most provide many filters specific for the needs of the discipline.
 Can produce an overwhelming number of results. You may not be able to narrow your results to a reasonable number even if you are using advanced searching techniques. 	 Can produce an overwhelming number of results. There are many options to narrow, but this search tool is still less focused than subject specific databases. The tool struggles a bit with pulling relevant content. 	 With effective searching, you can narrow your results to hone in on your topic so that you pull the most relevant articles available.
 Works with natural language searching. However; Google states that it works better with keyword searching. 	 Natural language searching is not effective. Use keywords. 	 Does not work with natural language searching. Use keywords and/or subject terms.
 The search is weighted by word order 	 Word order is irrelevant except when parentheses or, in some cases, Boolean terms (AND, OR, NOT) are used. 	 Word order is irrelevant except when parentheses or, in some cases, Boolean terms (AND, OR, NOT) are used.
 Offers "cited by" and related article features 	 "Cited by" not available 	 Cited by and related articles are available in some databases but not all. Sometimes this feature will vary by platform. For example, "cited by" is not available in ERIC via Ebsco, but it is available in ERIC via Proquest.

Find tutorials for Google, Google Scholar, Discover, and several library databases on the <u>Searching for Education</u> <u>Resources</u> research guide.

Chapter 8: Databases and database searching

Use the library databases to search for journal articles, conference proceedings, newspaper articles, and more. Many databases contain hundreds of full text journals and other types of information. The library also has specific databases that include art, music, film, and much more.

Off-Campus Access:

If you access the library databases via the library homepage from off-campus, you will be prompted for your Campus ID and password. (With the exception of the database, Films on Demand, you will never need the GALILEO password if you access the databases from the library homepage.)

If you access the databases via the GALILEO interface from off-campus, you will be prompted for the GALILEO password. You can get the GALILEO password by logging into the <u>D2L-Brightspace</u> course management system or your library account.

The library homepage and the GALILEO interface through Georgia State University provide access to the same content.

More on off-campus access

Databases by Name:

If you already know the name of the database you want to search start here:

- 1. Go to the library <u>homepage</u>
- 2. Underneath the main search box, you will see Databases by Name A-Z
- 3. Click on the first letter of the title of the database. For example, click on the letter "E" to access the ERIC database.
- 4. When the "E" section opens, you may need to scroll to find your database.

Discover	Catalog	Journals	Resea	arch Guides	Reserves	
Discover articles, books, media, unique collections and more Search		SEEKING	STUDENT A	DVISORS		
		Keep your library innovative Gain leadership experience				
				О ТОІИ .	THE COUI	NCIL
Go to Da · Select ·	tabases by	Subject			-	
Database	s by Name	A 7				
		A-Z J L M N O	<u>PRS</u> T	<u>uvw</u>)	

If you are curious to know the number of available databases, click to open the "Databases by Name" list and then scroll to the top. The library currently has access to 345 databases. (This number varies a bit as changes occur with licensing and other market factors.)

Databases by Subject:

With so many databases available, how do you know which ones to search? Most databases contain material covering a specific subject. You can view a list of recommended databases for your subject area under the "Databases by Subject" option. Also, each database has a link for more information about the contents of the database to the right of the database title.

- 1. Start at the library homepage
- 2. Underneath the main search box is a section entitled "Go to Databases by Subject"
- 3. Click the arrow to see a list of subjects
- 4. Click on the subject area most related to your topic



The basic concept for searching databases is the same for all databases, but each database is a little different. Navigation for a database is the same or very similar within a specific vendor's platform. For instance, EBSCO is a vendor that licenses access to a multitude of databases. If you are accessing databases through EBSCO, then you will recognize the navigation for all EBSCO databases. However, even within EBSCO, each database has its own set of unique features. The most notable difference in features is the advanced options for limiting your search.

EBSCO databases:

Some recommended databases in EBSCO: <u>Academic Search Complete</u>, <u>EBSCO ebook collection</u>, <u>Education</u> <u>Source, ERIC</u>, <u>Medline</u>, <u>CINAHL</u>, <u>Professional Development Collection</u>, <u>Psychinfo</u>, <u>Newspaper Source</u>

Go here to select from a list of all EBSCO databases

Tutorials: The <u>EBSCO YouTube channel</u> offers many tutorials for searrching their databases, or try one of these frequently used tutorials:

EBSCOhost Basic Search Tutorial

How (and Why) to Use the APA Thesaurus When Searching PsycINFO via EBSCOhost

Find Three Peer-Reviewed Empirical Articles in PsycINFO tutorial

More about searching in EBSCO databases:

[This section originally created by Brenna Helmstutler as part of the library research guides for Georgia State University's College of Education.]

Setting up your search

- 1. After logging in, the first page you will see is a Basic Search page If you would like to search more than 1 EBSCO database, click on the Choose Databases link, select, and click OK.
- 2. Click on Advanced Search for more effective searching and limiting options.
- 3. Enter each concept of your topic into each search box as keywords or phrases (instead of entering a string of words or entire topic statement as you might do when searching Google). Doing so works with the controlled vocabulary setup in each database and increases results.
- 4. (In the Search Modes section: keep the pre-selected option for Boolean/Phrase. This will search for only the keywords/phrases you have selected and make for a more precise search.)
- 5. Limit your results section: use to set up the type of articles you are seeking by date, publication type, and many other options. If you have chosen to search more than 1 database, you will see limiters for each database.
- 6. Click search to generate your results page.
- 7. On your results page, you will see the number of results to the left of the page. If there are hundreds or more, you may want to use the options on the left of the page to refine your search, or manually add a keyword or phrase in the search box area at the top of the page. Once you are satisfied with the number of results you can sort by date or relevance using the sort drop-down menu above the results.

If there are no results found:

1. Look for a thesaurus link at the top of the page to check your keywords, or try other keywords that you know of that relate to your topic.

- 2. Try searching with broader keywords. With the refining option on the results page, you can always narrow the topic at that point.
- 3. If you're still having difficulty, contact the Education Librarian for assistance.

Accessing Articles:

In each results record, there will either be a PDF or HTML link, or a Find It @ GSU button.

- 1. PDF Full Text link or HTML Full Text Link: the article is available online within the database you are using. When there is an option, always select the PDF link because the HTML link does not include page numbers that you might need in your citations.
- 2. "FindIt@GSU" button: click that and a window will open with options for finding the article either from another database location or to find the article in print in the library.
- 3. If print or online access is not available, there will be a link in the window to request the article via ILLiad (Interlibrary Loan) from another library.

To store/email/export articles:

- 1. Click on the Add to Folder link for the citation you would like to store or email. This will create a "folder has items" link on the right side of the page. Click on that link and you will see options to print/email/save.
- 2. Setting up a folder allows for unlimited storage of content you find in EBSCO for easy access as you conduct your research. Click on the "sign in to my EBSCOhost" link and then click on the "Create a new account" link. This is free of charge and separate from your GSU accounts.
- 3. Additional folders can be added to organize articles by class, subject, etc. and can be shared.
- 4. Along with or instead of using the EBSCO folder, you may want to use Endnote or Zotero. Find out more about Zotero <u>here</u>. To export citations into your Endnote library, add selected citations into the folder as stated above. Click on the "Export" icon, ("Direct Export to Endnote" is pre-selected for you), and click Save. Your Endnote library must be open for citations to be exported. Find out more information about EndNote <u>here</u>.

Searching databases individually vs. multiple database searching: In EBSCO, some searching features disappear when you are searching multiple databases at once. One such feature is citation tracking. If you want to use citation tracking, search only one database at a time in EBSCO. Not all EBSCO databases offer citation tracking. Also, subject terms for subject searching vary within each database. Search databases individually to take optimal advantage of subject searching.

Searching for Empirically-Based Education Articles

The most direct route is to search **PsycINFO**. Select Advanced Search, enter your topic, and then select Empirical Study in the Methodology field.

Methodology	All	^
	BRAIN IMAGING	
	CLINICAL CASE STUDY	
	EMPIRICAL STUDY	×

To search for empirical studies in **ERIC**, go to Advanced Search, enter your topic in the 1st search box, empirical study in the 2nd box. In the Limiters section: 1) Select Peer-Reviewed. 2) In the Journal or Document field, select Journal. 3) Select Reports-Research from the Publication Type field.

Publication Type	Barranta - Fuchativa	
ableadon ()pe	Reports - Evaluative	\mathbf{r}
	Reports - General	
	Reports - Research	
	Speeches/Meeting Papers	~

["More about searching in EBSCO databases" and "Searching for Empirically-Based Education Articles" are modified from this research guide originally created by Brenna Helmstutler.]

Proquest databases:

N

Tutorials: Go here to see a list of tutorials created by Proquest for searching their databases.

Some recommended databases in Proquest: <u>PAIS</u>, <u>Linguistics and Language Behavior Abstracts (LLBA)</u>, <u>Dissertations & Theses (PQDT)</u>, <u>ProQuest Education Journals</u>, <u>ProQuest Research Library</u>

Other Databases and Multidisciplinary research:

Web of Science, Pubmed, JSTOR, Science Direct, Databases by subject

Chapter 9: Library Services

GIL Express: Search the <u>Universal Catalog</u> to request books from any University System of Georgia School. The default selection is for these books to be delivered to Georgia State University. However, if you live near another <u>USG school</u>, you can have books delivered to that USG school instead.

ILL: (Interlibrary Loan): Request materials (journal articles, books, and more) from other libraries worldwide.

Desktop Article Delivery: Faculty and graduate students can request electronic versions of articles that are only available in print in the GSU collection. Simply request the item through ILL.

ARCHE: Atlanta Regional Council of Higher Education: You can visit and check out materials from other libraries who are members of ARCHE. Obtain an ARCHE card from the circulation desk on the first floor of Library North before visiting an ARCHE school. Visit the <u>ARCHE</u> website to find out which schools are members.

More:

Special Libraries and Archives: Don't forget to check special libraries and archives for information on your topic. You may be able to obtain the information you need online. If the information is not available online, some libraries will send it to you. Otherwise, you may have to visit the library in person and use the material there in a special reading room.

Chapter 10: Writing

Writing Studio-GSU

As a GSU student, you can get one on one help with a writing tutor through the <u>Writing Studio</u> at Georgia State University.

Style Guides:

See Style Guides in Chapter one for resources about how to write and cite in a particular style.

Over 80 Writing related topics available online

Find online information <u>here</u> for over 80 writing related topics by viewing handouts from the Writing Center at the University of North Carolina-Chapel Hill.

Academic honesty and avoiding plagiarism

Information about plagiarism and academic honesty is available in the <u>GSU Code of Conduct.</u>

Find out more about plagiarism:

- Plagiarism Tutorial (10 minutes): <u>http://library.acadiau.ca/tutorials/plagiarism/</u>
- <u>What is Plagiarism</u> website
- Harvard Graduate School of Education's tutorial: <u>"Principles of Paraphrasing"</u> (This takes about an hour or so.)

Try the GIL catalog to find books in the library on writing and research. Here are a few suggestions:

Books on writing:

- Writing with sources: a guide for students by Gordon Harvey- Library North 4: PE1478 .H37 2008
- <u>The Longman handbook for writers and readers</u> by Chris M. Anson and Robert A. Schwegler-Library North 4: PE1408 .A61844 2008
- <u>The Dissertation Journey</u> by Carol M. Roberts, Ref. LB1742 .R63 2004, Located on Library North 2 in the reference section.
- *How to write a thesis* by Harry Teitelbaum- Library North 4: LB2369 .T36 2003

Books on Research Methods:

- <u>Research methods: The basics</u> by Nicholas Walliman- Library North 5: H62 .W254 2011
- Sage Handbook for Research in Education-Library North 4: LB1028 .S14 2011
- <u>The Sage Handbook of Qualitative Research</u>-Library North 5: H62 .H2455 2011
- <u>Educational Research: A Guide to the Process</u> by Norman E. Wallen-Library North 4: LB1028 .W275 2001. Also available as an Ebook <u>here</u>.

Getting oriented to different types of writing:

Sometimes it helps to have a good example.

For research papers, start by browsing the following journal:

Colonial Academic Alliance Research Journal

The <u>Colonial Academic Alliance Journal</u> publishes undergraduate research. This research is faculty mentored and undergoes peer review before being published. Thus, the quality of the work is good. View the most popular papers, or enter your search terms for a specific topic.

For Theses and Dissertations, start by browsing the following two collections:

Digital Archive @ Georgia State University

The <u>Theses and Dissertations Collection in the Digital Archive @ GSU</u> houses the final drafts of theses and dissertations that have made it through the process here at GSU. So, learn from those who have gone before you. You can browse by discipline or enter a search term to search for something like an advisor's name or an author's name.

Dissertations and Theses (Proquest)

<u>Proquest's Dissertations and Theses database</u> is the most comprehensive database of theses and dissertations in existence. It contains many full text theses and dissertations from the U.S. and around the world.