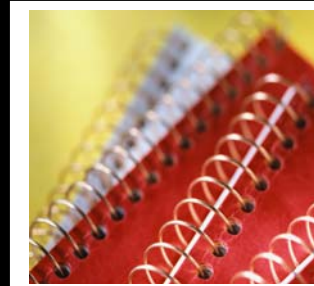


Brainstorming Concepts and Effective Search Strategies



A Research & Library Skills Exercise ♦ 2011-2012
www.lib.umd.edu/UES/engl101/exercises.html

Instructor's Name: _____ ENGL 101 Section: _____ Class Meeting Time: _____

Your Name: _____ Date: _____

Why break your research question into main concepts?

By plucking out the main concepts or ideas in your research question (in the form of keywords), you can find useful information more efficiently. This is true whether you are searching the Libraries' Catalog, databases linked in Research Port, or the web. Online library resources almost universally require you to enter keywords into the search box; entering the entire research question will not be as effective and is likely to return zero results.

Step 1 example: **Research Question:** *Do hybrid cars cut down on gas consumption?*
Concepts/ideas/keywords: hybrid cars gas consumption

After breaking down your research question into concepts, you will need to brainstorm additional synonyms or keywords.

Why is brainstorming synonyms and related words important?

Two hydrogen atoms bumped into each other recently. One said, "Why do you look so sad?" The other responded, "I lost an electron." Concerned, the first one asked, "Are you sure?" The other replied, "I'm positive!"

Not everyone will use the same words in the same context (e.g., positive = meaning "sure" OR "a charged atom, not neutral"). The words that you choose might not be the exact ones used by other people. The same thing happens when searching for books or articles.

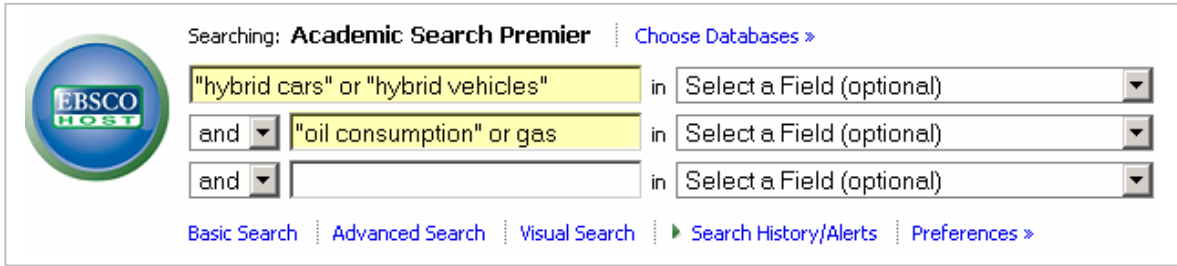
Step 2 example: **Synonyms/Related Words for hybrid cars:** hybrid vehicles, hydrogen cars, electric cars
Synonyms/Related Words for oil consumption: gas, fuel consumption, petroleum, petrol

Take your concepts and synonyms and combine them in different ways in order to fine relevant results.

Step 3 example: Use **Academic Search Premier**, a General/Multidisciplinary database found in Research Port.

Use quotation marks to form a phrase (e.g., "fuel consumption").

See page 5 for more information about combining words using AND and OR.



Searching: **Academic Search Premier** | [Choose Databases »](#)

in

and in

and in

[Basic Search](#) | [Advanced Search](#) | [Visual Search](#) | [Search History/Alerts](#) | [Preferences »](#)

The Exercise

Step 1: This exercise will step you through the **process of picking out the main concepts** or ideas in a research question:

TIP: Cross out words that are in the following categories:

- “small” words (e.g., on, who, the, is, etc.)
- statements of timing (e.g., always, sometimes, often, etc.)
- “fuzzy” words / words that aren’t specific (e.g., should, get, against, etc.)

Write the main concepts (one to two word phrases) on the line provided.

Example: *Does homework lead to academic success?*

homework, academic success

What are ways in which to prevent sports injuries in college students?

How are public universities being affected by the economy?

What are the health benefits of eating chocolate?

Step 2: Now, **brainstorm synonyms and related words:**

TIPS:

- Consider using a thesaurus to help you brainstorm.
- Select phrases that are commonly used word combinations.
For example: “climate change” or “white collar crime.”
- Remember that using alternate spellings, singular vs. plural forms, capitalization, and even punctuation can result in different books or articles retrieved.
- Consider broader and narrower terms that convey the same ideas in your topic.
For example, “Social Networking” is a broader term than “Facebook.”
- Use your previous knowledge of the topic to come up with related terms.
For example, you can use the term “Division I” when searching for information about college sports.

The Exercise:

Use this research question: ***Does homework lead to academic success?***

First, pick out the concepts/ideas of the research question. Then brainstorm three synonyms or related keywords for each concept/idea:

Concept / Idea 1:	Concept / Idea 2:

Synonyms / Related Keywords For Concept 1:	Synonyms / Related Keywords For Concept 2:

Now, work through Steps 1 and 2 using your own topic:

Write your research question or thesis statement in the box below. It should contain at least two concepts:

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Break down your research question (Step 1):

Concept / Idea 1:	Concept / Idea 2:

Brainstorm some synonyms and related terms (Step 2):

Synonyms / Related Keywords For Concept 1:	Synonyms / Related Keywords For Concept 2:

Step 3: Learn to **combine your concepts & keywords** into an effective search strategy:

Search Connectors AND and OR: Why is it important to use them?

Use the search connectors **AND** and **OR** (also called *Boolean* connectors) to combine your concepts and keywords; this strategy will allow you to quickly find information relevant to your topic in any online search engine.

Using AND:


In the real world, when you order a meal in a fast-food restaurant, using AND means getting more food. For example, people typically say: *I'd like to order a hamburger AND fries AND a coke.*

When using search engines, AND works differently. AND is used to narrow or target your search. AND connects different concepts/ideas together. AND will find both of your concepts/ideas in the books or articles retrieved.

Example: *Imagine you are writing a paper on women in sports.*

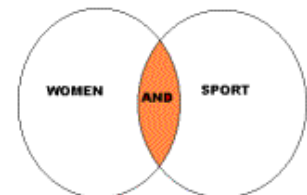
AND connects concept 1 to concept 2:

Catalog basic search

choose type of search enter word/s to search  tips

word/s anywhere women AND sports **search**

Visual Representation:



The Exercise:

Mark the search strategies that use **AND** correctly by connecting different concepts/ideas together:

“animal rights” AND legislation

marijuana AND pot

“health care” AND elderly


“college students” AND weight

storms AND hurricanes

college AND university

Using your own topic, build an effective search strategy in the box below using AND to find books:

Catalog basic search

choose type of search enter word/s to search  tips

word/s anywhere **search**


Using OR:

When using search engines, OR will return MORE results. OR is used to broaden or expand your search. OR connects related or synonymous concepts/ideas together. OR will find either or both of your concepts/ideas in the books or articles retrieved.

Example: *Imagine you are writing a paper on gender roles.*

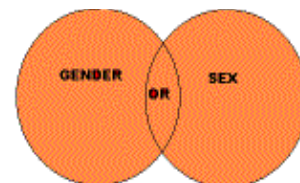
OR connects synonyms/related words together:

Catalog basic search

choose type of search enter word/s to search 

word/s anywhere gender OR sex **search**

Visual



The Exercise:

Mark the search strategies that use OR correctly by connecting synonyms/related words:

“animal rights” OR legislation

marijuana OR pot

“health care” OR elderly


“college students” OR weight

storms OR hurricanes

college OR university

Using your own topic, build an effective search strategy in the box below using OR to find books:

Catalog basic search

choose type of search enter word/s to search 

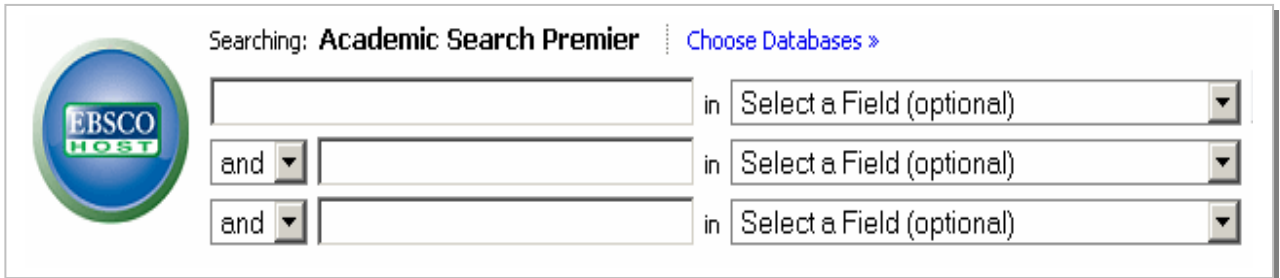
word/s anywhere **search**

More search strategies:

- Use the **truncation symbol *** to broaden your search. Using this symbol after the root of the word will find all of the possible word variations.
e.g., *accessib will find results that contain the words *accessible, accessibility, accessibly, etc.***
- Use quotation marks to find specific phrases. **e.g., “mentoring program”**

The Exercise:

Using your own topic, build an effective search strategy in *Academic Search Premier* using AND and OR:



If you typed: *photo**

The search engine would search for that root. Which of the following words would the search engine select to include in the results list?

- photos
- photography
- pho
- photographer
- phobia

Imagine you are searching a database for the phrase “**hybrid cars.**” How would you expand your search strategy using synonyms or related words to find more results?

How would you construct a search strategy so that you would find **all** of the following terms in the same article?

birds, dogs, fish: _____

Illustrate how you would construct an effective search using AND, OR and (parentheses), using all of the following concepts and synonyms:

study skills, college students, university students, study habits
