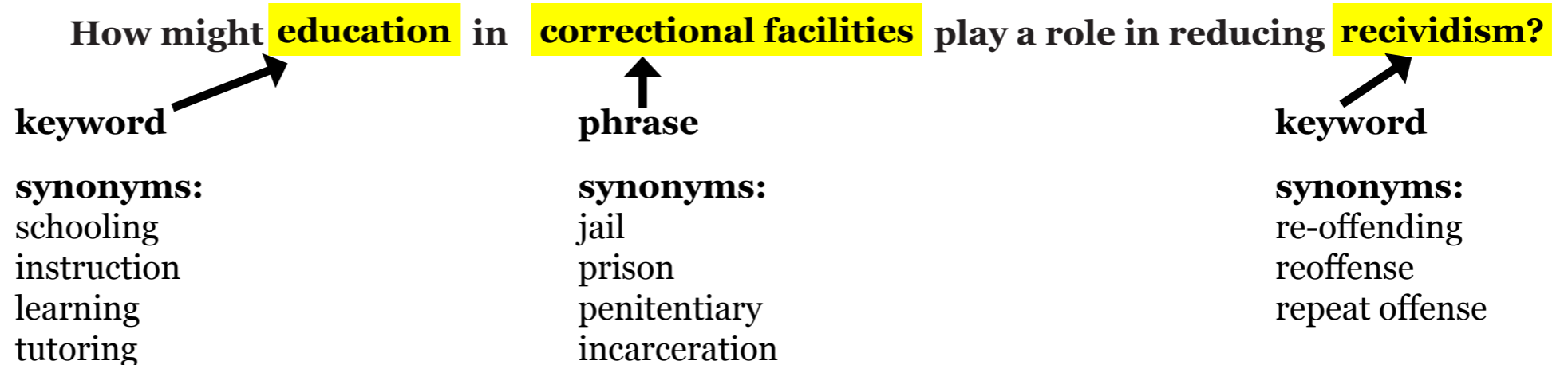# KEYWORDS, PHRASES & SYNONYMS

Keywords are the main ideas in your research question or thesis statement, and these are the words that you will use to search for information on your topic. Sometimes an idea will include more than one word to describes the concept, and in this case, you'll have a **phrase**. Examples of phrases are concepts like "*global warming*", "*stem cell*", or "*gun control*". Different authors may use different terms to describe the same information. These are known as **synonyms**.

Let's take the question: **How has the Internet influenced students' learning styles?**

- There are three main concepts in the question: *Internet*, *students*, and *learning styles*.
- *Internet* and *students* are both **keywords**.
- *"Learning styles"* is a **phrase**, because this concept has more than one word. When you use a phrase in a **search statement**, you will use quotation marks around the phrase.
- **Synonyms** for the keyword *Internet* are *Web, online, WWW*, or *World Wide Web*.
- **Synonyms** for the keyword *students* include *learners, pupils*, or *scholars*.
- **Synonyms** for the phrase *learning styles* might focus on a specific style of learning, such as *auditory, visual, tactile*, etc. For this reason, it is important to write down not only the actual words in the question or thesis, but alternate terms as well.

Here's another example. All of the main concepts are highlighted in yellow:

How might **education** in **correctional facilities** play a role in reducing **recidivism?**

keyword   **phrase**   **keyword**

synonyms: | **synonyms:** | **synonyms:**
schooling | jail | re-offending
instruction | prison | reoffense
learning | penitentiary | repeat offense
tutoring | incarceration |

By **using quotation marks around phrases**, the computer looks only for the phrase and not for the words separately. By using quotation marks, you are telling the computer to only bring back pages containing the terms you entered, in the exact order you typed them, such as in these examples:

"school vouchers"

"charter schools"

"academic achievement"

"school prayer"

Let's take a look at our previous example:

How might education in correctional facilities play a role in reducing recidivism?

The term *"correctional facilities"* is a phrase and should be written in quotation marks when doing a search so the computer searches for the terms together instead of separately. Another phrase for this example would be the synonym for *recidivism*: *"repeat offense"*

Note: Phrases should be kept short, only 2-3 words in length. The longer the phrase, the less likely you are to find that exact phrase in your search. For example, you wouldn't use "education in correctional facilities" or "role in reducing recidivism" in a search.

There are a number of **Boolean operators**. The ones you will learn in this course are **AND** and **OR**. It is a good idea to capitalize Boolean operators when you use them in a search.

AND

AND connects all of the main concepts together, and tells the computer you want ALL of the words in your search results. This narrows your search, giving you FEWER results.
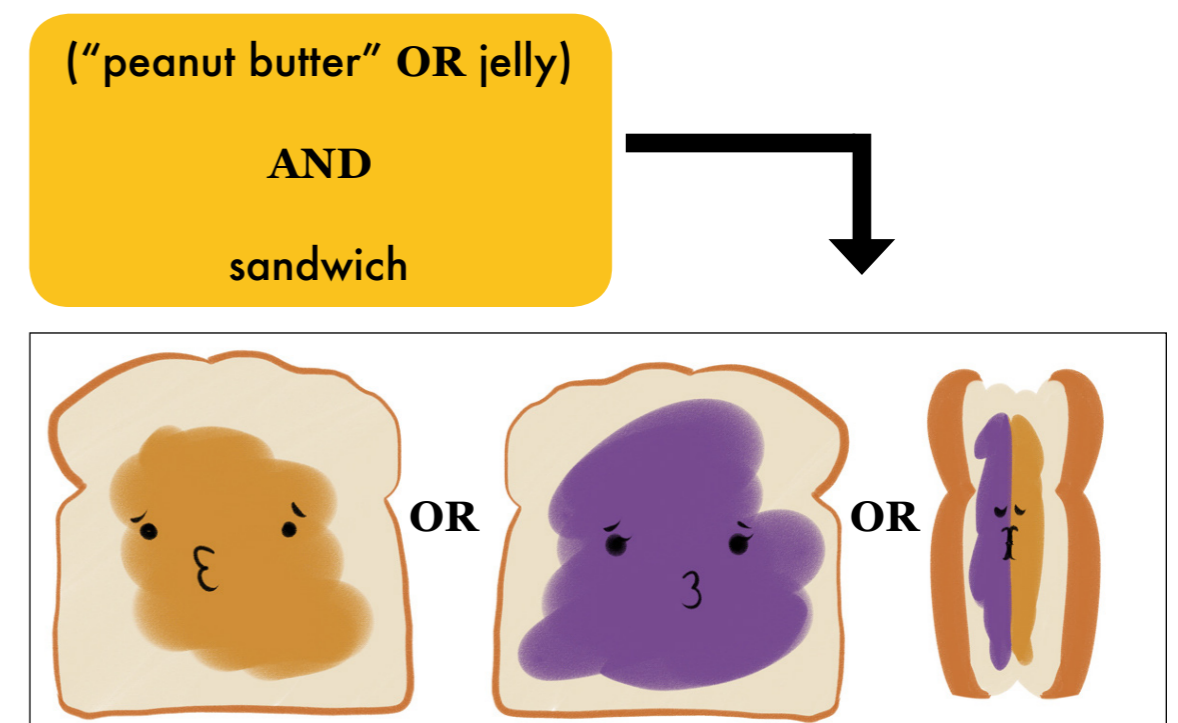
In this example you are asking for a sandwich that has peanut butter AND jelly (not just jelly or just peanut butter). You will ONLY get peanut butter and jelly sandwiches.

"peanut butter"

AND

jelly

AND

sandwich
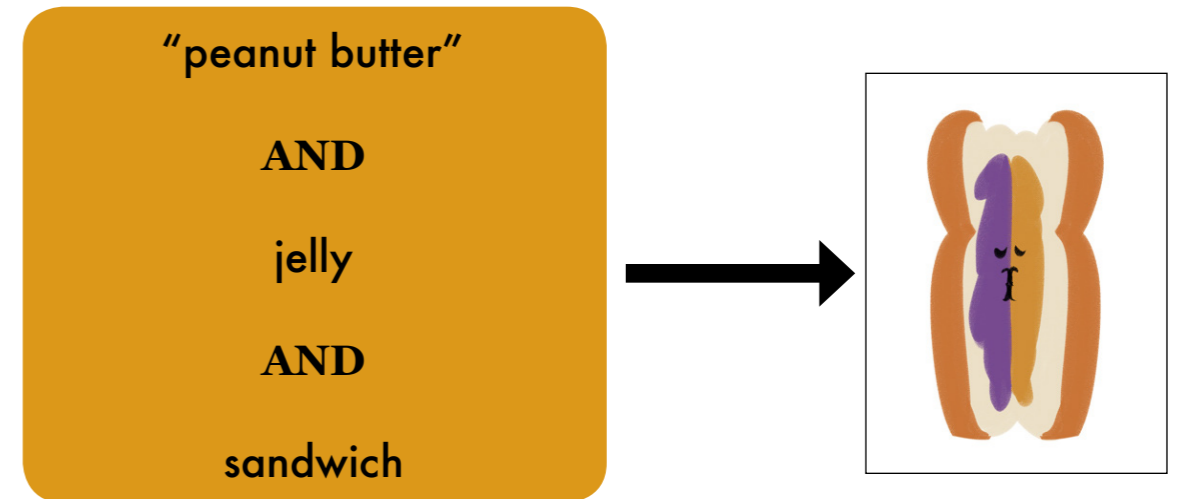
OR

OR broadens your search, giving you MORE results. Using **OR** tells the computer to find ANY of the terms where each word may appear separately, as well as where any terms may appear together. **Note: You MUST use parentheses around OR terms.**

In this example you are asking for a sandwich that has peanut butter OR jelly. This finds peanut butter and jelly sandwiches, sandwiches with jelly only, and sandwiches with peanut butter only.

("peanut butter" **OR** jelly)

AND

sandwich

OR   **OR**

All images courtesy of http://galleryhip.com/peanut-butter-jelly-cartoon.html

Let's take another look at our previous example:

How might education in correctional facilities play a role in reducing recidivism?

There are a number of ways we can use Boolean operators to separate these terms. We will use **AND** to connect the main concepts (education, correctional facilities, and recidivism). We will use **OR** between synonyms, since different sources will use different terms.

education

AND

"correctional facilities"

AND

recividism

In this sample **search statement**, we take the main concepts right out of the question. We want results to include all three terms. Notice that the phrase "correctional facilities" is written using quotation marks. This forces the computer to search for these words together. Also notice that the Boolean operators are capitalized. (Most of the time it doesn't matter, but a few databases require it, so always capitalizing Boolean operators is a good idea.)

(education OR schooling)

AND

("correctional facilities" OR jail)

AND

(recividism OR "repeat offense")

Since we know that different sources will use different terms, we will include some of our synonyms in this example. Here we tell the computer to look for either *education* **OR** *schooling* (or both). This will find more results than just looking for sources with the term *education*. Notice that we use parentheses ( ) around **OR** terms and quotation marks around phrases.

The search techniques covered here (keywords, Boolean operators, phrase searching) are combined to create **search statements**. Search statements are used when searching catalogs, databases, and search engines to find books, articles, and websites.

Any research question or thesis statement can have many possible search statements. These are just two examples.

To truncate means to 'chop off'. **When you truncate, you chop off the end of a word so the computer can search for multiple endings**.

Here's an example of how truncation works in a database:
  • You search for the word *advertisement* and retrieve 23 results. All of these have the word *advertisement* in them.
  • You truncate the term like this: *advertis** You retrieve 850 results showing variants after the 's', such as
    ◇ advertisE
    ◇ advertisED
    ◇ advertisER
    ◇ advertisES
    ◇ advertisING
    ◇ advertisEMENT
    ◇ advertisEMENTS

Truncation is a great way to broaden your search and pick up more results, but there are a few things that are important to remember when using truncation:

  • **Different databases use different truncation symbols.** Most use an asterisk (*), but a few use exclamation points, question marks, and dollar signs. Use the database help screens to determine which symbols are appropriate. *** ! ? $**

  • **Truncation only picks up word ENDINGS, NOT SYNONYMS**. For example, truncating after the 'n' in science (*scien**) will find science, sciences, and scientific, but it will NOT find the words biology, chemistry, or astronomy.

  • **Be careful where you place the truncation symbol.** You don't want to overtruncate (or cut too much) and you also don't want to undertruncate (cut too little).

OVER TRUNCATION: com***** finds
  • com EDY
  • com ICAL
  • com MERCE
  • com PETENT
  • com PLAINT
  • com PLIANT

(NONE of these words are relevant to the topic of computers.)

UNDER TRUNCATION: computers***** finds
  • computers

(There are NO possible endings after the 's'. This search will only find the word computers.)

PROPER TRUNCATION: comput***** finds
  • comput ATION
  • comput E
  • comput ER
  • comput ERS
  • comput ES
  • comput ING

(ALL of these words are relevant to the topic of computers.)

This video covers the basics of starting a research project. It includes information on properly forming a research question, using keywords and synonyms, and creating a search statement using Boolean operators and phrase searching:
https://library.weber.edu/researchandteaching/lib1704/Videos/ResearchBasics

This video covers the basic search techniques covered in this section, including wildcard symbols, truncation, parentheses and quotation marks:
https://library.weber.edu/researchandteaching/lib1704/Videos/SearchTechniques

This video covers the basics of Boolean Operators:
https://library.weber.edu/researchandteaching/lib1704/Videos/BooleanOperators