INFORMATION LITERACY

An Introduction

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UMLibrary

INTRODUCTION

Information Literacy is knowing when and why you need information, where to find it and how to evaluate, use and communicate it in an ethical manner. [CIlip, 2004]

In today's technological world you cannot talk about Information Literacy without mentioning Digital literacy.

With the rise of Fake News it has become very hard to be able to distinguish between factual and genuine sources of information.

6 SKILLS OF INFORMATION LITERACY

TASK DEFINITION

Identifying the need for information, why do you need that information?

INFORMATION SEEKING STRATEGIES

How are you going to find the exact information you need? What tools will you use?

LOCATION AND ACCESS

Where can you find that information? How are you going to access the information?

6 SKILLS OF INFORMATION LITERACY

USE OF INFORMATION

What are you going to do with the information? Use in an ethical manner, for research, commerical purposes, etc...

SYNTHESIS

How did you use the information? Reinterpreting the information, summarising, referencing/citation, etc...

EVALUATION

How do you know that that information is correct/factual/not Fake/mis/dis-information

Examples of a need for Information

ACADEMIC

Assignment question, Dissertation, retrieving research papers in favor or against a particular argument
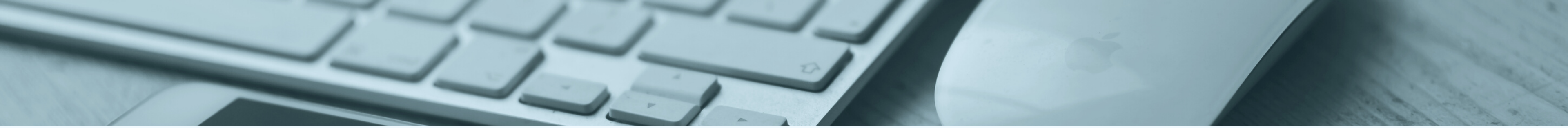
DIRECTIONAL

Locating a building, navigating a foreign country, identifying a shop

PERSONAL

how to cook a particular food, locating a family member online, learning about events near your location

PROFESSIONAL

checking how much vacation leave you have left, identifying possible job opportunities, figuring out how to meet the requirement for a promotion

INTERPRETING INFORMATION

Information can not be understood in a bubble. The context in which the information was created impacts the information retrieval process.

Always be aware of the nature of the information being retrieved.

Who created it? Why? What purpose does sharing such information achieve?

Example:

Unemployment in a country is at 5% of the general population.
What do you make of this information?

WHAT TYPE OF SOURCE IS IT:

PRIMARY

Primary sources provide raw information and first-hand evidence. Examples include interview transcripts, statistical data, and works of art. A primary source gives you direct access to the subject of your research.

SECONDARY

Secondary sources provide second-hand information and commentary from other researchers. Examples include journal articles, reviews, and academic books. A secondary source describes, interprets, or synthesizes primary sources.

How to tell if a source is primary or secondary

To determine if something can be used as a primary or secondary source in your research, there are some simple questions you can ask yourself:

- Does this source come from someone directly involved in the events I'm studying (primary) or from another researcher (secondary)?
- Am I interested in analyzing the source itself (primary) or only using it for background information (secondary)?
- Does the source provide original information (primary) or does it comment upon information from other sources (secondary)?

https://library.ithaca.edu/r101/primarysources/

What do you use primary sources for?

Primary sources are the foundation of original research. They allow you to:

- ✔ Make new discoveries
- ✔ Provide credible evidence for your arguments
- ✔ Give authoritative information about your topic

If you don't use any primary sources, your research may be considered unoriginal or unreliable.

What do you use secondary sources for?

Secondary sources are good for gaining a full overview of your topic and understanding how other researchers have approached it. They often synthesize a large number of primary sources that would be difficult and time-consuming to gather by yourself. They allow you to:

- ✔ Gain background information on the topic
- ✔ Support or contrast your arguments with other researchers' ideas
- ✔ Gather information from primary sources that you can't access directly (e.g. private letters or physical documents located elsewhere)

When you conduct a literature review, you can consult secondary sources to gain a thorough overview of your topic. If you want to mention a paper or study that you find cited in a secondary source, seek out the original source and cite it directly.

Remember that all primary and secondary sources must be correctly cited to avoid plagiarism.

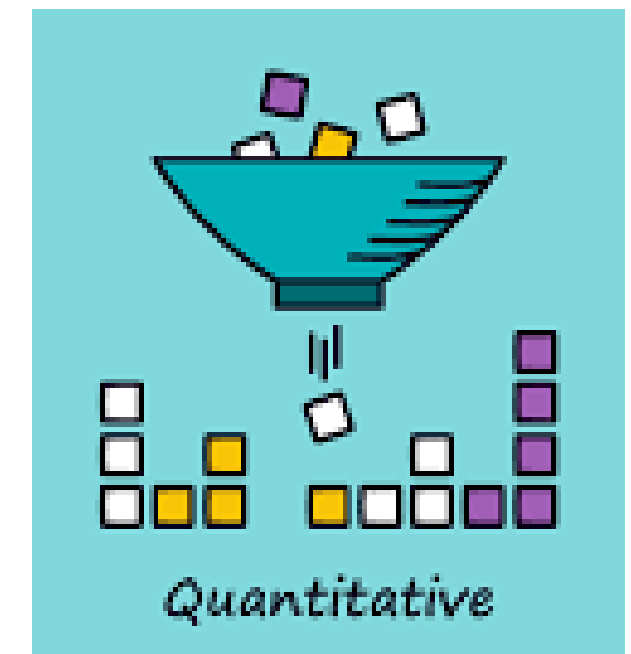| Research field	Primary source
History	• Letters and diaries • Photographs and video footage • Official documents and records • Physical objects
Art and literature	• Novels and poems • Paintings and art installations • Films and performances
Communication and social studies	• Interview transcripts • Recordings of speeches • Newspapers and magazines • Social media posts
Law and politics	• Court records • Legal texts • Government documents
Sciences	• Empirical studies • Statistical data

WHAT TYPE OF RESEARCH IS IT?

QUALITATIVE

Qualitative research is a scientific method of observation to gather non-numerical data. This type of research "refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and description of things" and not to their "counts or measures".
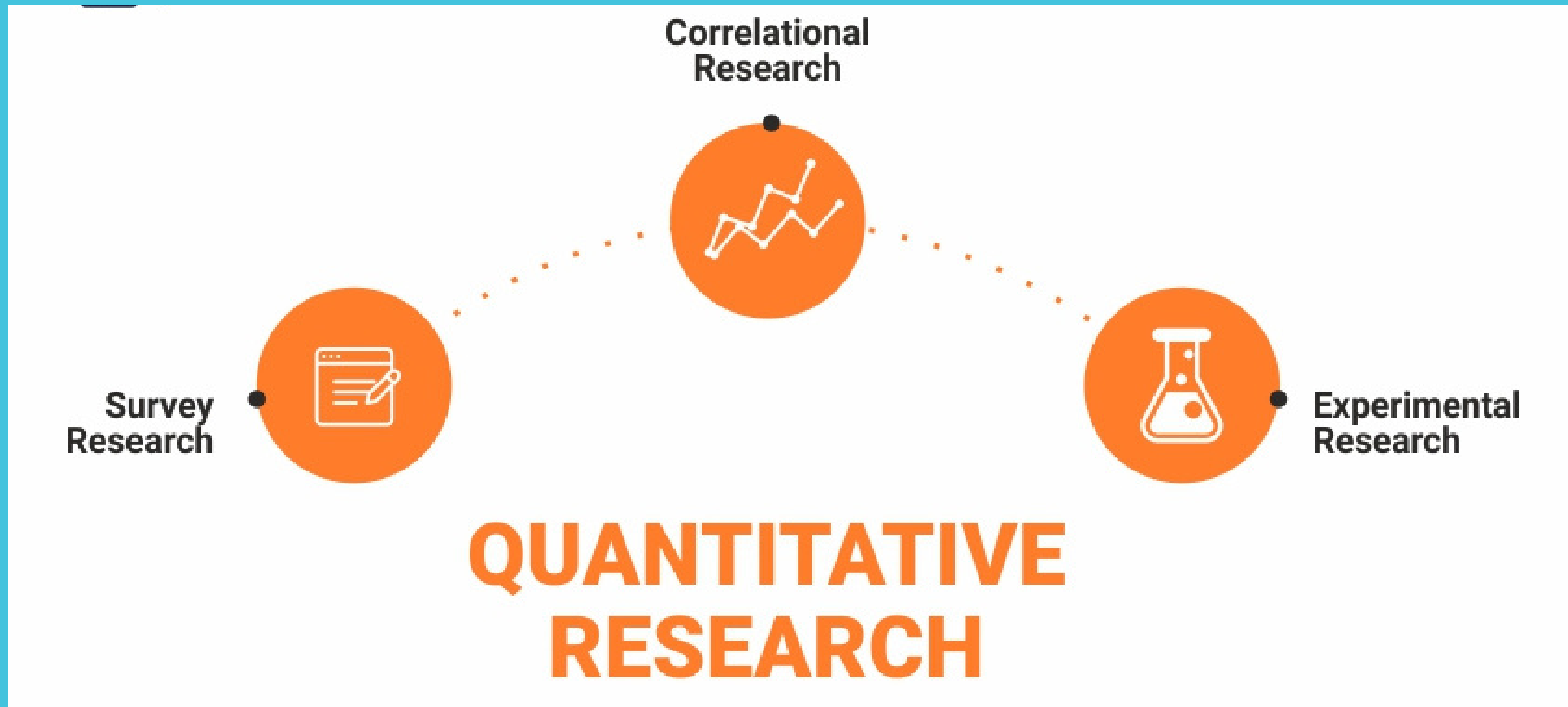
QUANTITATIVE

Quantitative research, is defined as a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical or computational techniques. Quantitative research gathers data in a numerical form which can be put into categories, or in rank order, or measured in units of measurement..

ONE-ON-ONE INTERVIEW

CASE STUDY RESEARCH

FOCUS GROUPS

QUALITATIVE RESEARCH METHODS

RECORD KEEPING

ETHNOGRAPHIC RESEARCH

PROCESS OF OBSERVATION

Qualitative Research

Research that use a variety of methods to develop deep understandings of how people perceive their social realities and in consequence, how they act within the social world. For example, diary accounts, open-ended questionnaires, documents, participant observation, focus groups, interviews, etc...

Correlational Research

Survey Research

Experimental Research

QUANTITATIVE RESEARCH

Quantitative Research

Quantitative research gathers information using sampling methods. Examples include: online polls, questionnaires, observations about measurable qualities, etc... The results of which can be depicted in numerical form. Usually this type of data can be used to construct graphs and tables of raw data.

INFORMATION RESOURCES
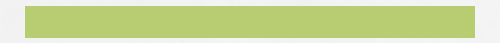
Information can come in many shapes and forms

Information can be printed and published, online on websites and social media, it can be in the form of interviews, videos, research papers, books, leaflets, posters, case studies, etc...

DICTIONARIES

Alphabetically arranged: provide factual information about the meaning, etymology (origins, history) and pronunciation of words

- General language dictionaries, such as The Oxford English Dictionary or the Cambridge Dictionary of American English

- Technical or special term dictionaries: cover different subject areas (useful for a particular intended audience) - Example: Medical, Financial, Engineering dictonaries
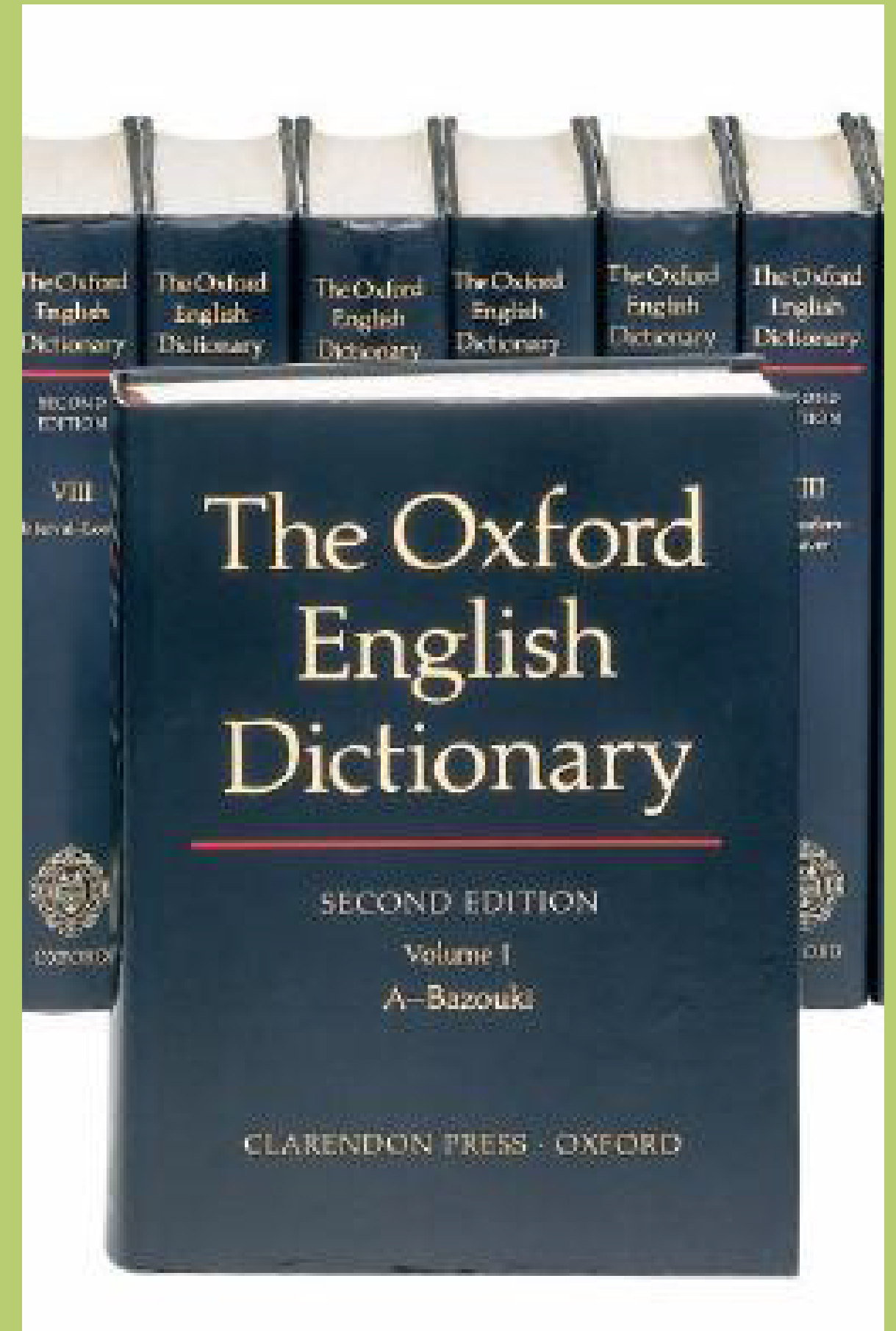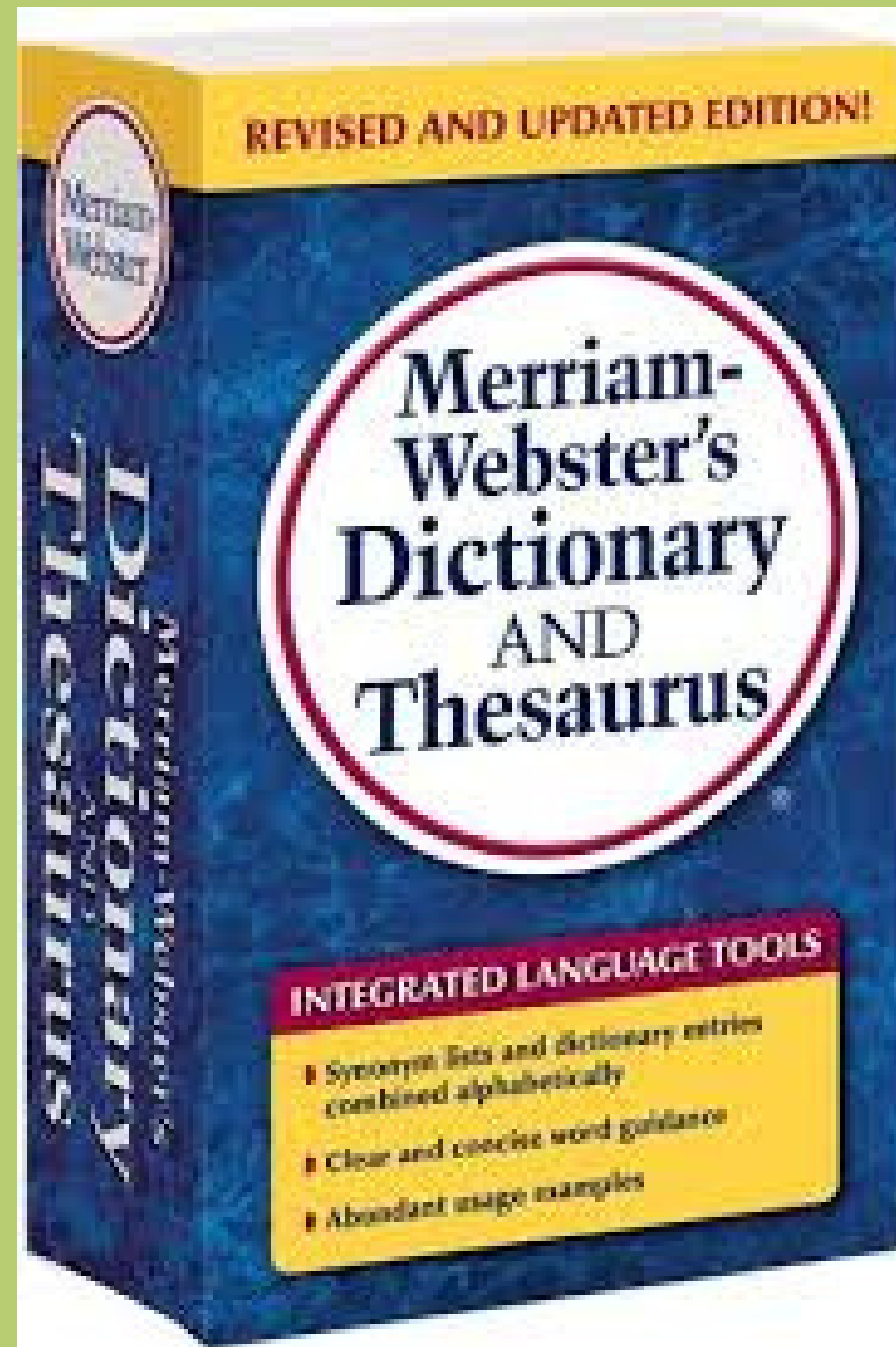
THESAURI
(SYNONYMS OR ANTONYMS OF TERMS)

Can be used in databases for describing, indexing and accessing information (referred to as controlled vocabulary).

Similar to dictionaries one can use Subject Thesauri to expand vocabulary or identify keywords to use in searches.

- http://thesaurus.com
- http://www.merriam-webster.com
- http://thesaurus.babylon.com/ and many more.

BOOKS / e-BOOKS

Cover a breadth of materials and repackage information that has been produced elsewhere.

Useful for obtaining general background information and putting a topic in context.

Problems

- It can take a few years between the completion of a work and its publication in the form of a book (not the most valuable source for scientific and technical topics)

- Not suitable for very specialized or narrow topics

JOURNALS and DATABASES

A database is a searchable collection of information.

A database is where you find journal articles.

Each database contains thousands of articles which you can search for simultaneously and quickly to find articles with higher relevancy than searching in individual journals.

Check out the UM Library Database collection:

www.um.edu.mt/library/databases

JOURNAL LITERATURE

Periodical and journal = synonymous - the term magazine is reserved (in UK usage) for the more popular mass-circulation titles

Particularly significant in academic, commercial, industrial and research libraries

Key source of current material: takes less time to get a journal article published than a book (although this may vary - prestigious journals/electronic)

Content: organised in volumes and issues and published regularly (e.g. weekly, monthly, quarterly)

- Articles on separate subjects
- Written by a variety of authors, designed to stand alone

THESES OR DISSERTATIONS

Statements of investigation or research submitted in order to obtain a higher degree (MPhil and PhD-level theses)

- not published commercially

- not likely to attract a sufficiently broad readership for commercial publication

- produced in very limited numbers
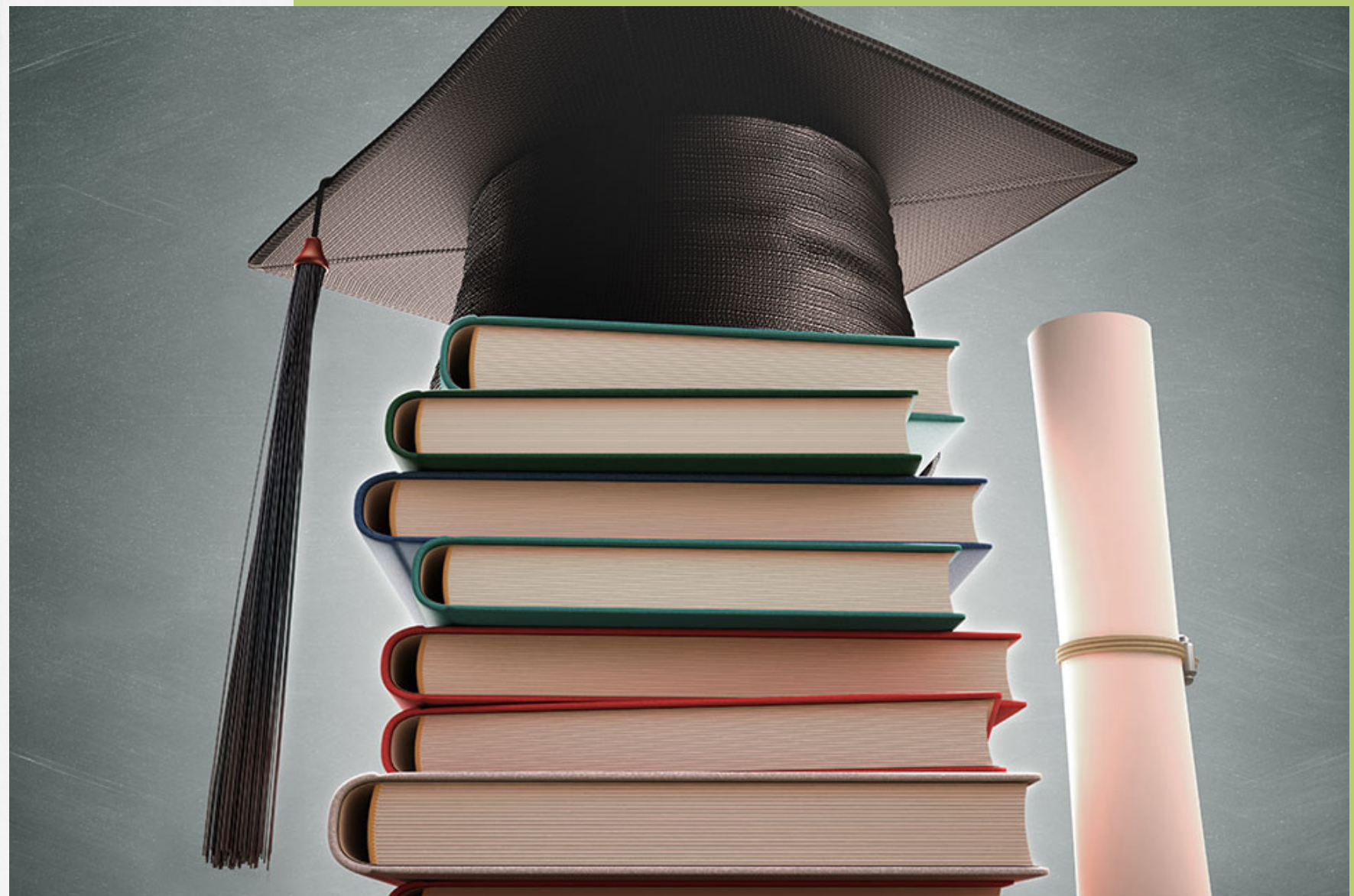
INFORMATION LITERACY

BUILDING SEARCH QUERIES

THE TOPIC

- What do you need to find?
- Is the topic broad or narrow?
- Are there any professional terms used?
- What keywords am I going to search with?
- Can I use other synonyms for the keywords I selected?
- What did other professionals use to describe their work?

Figuring out all that before you start searching can make your life easier.

HOW TO IDENTIFY YOUR KEYWORDS?

KEYWORD - a word used to indicate the content of a document.
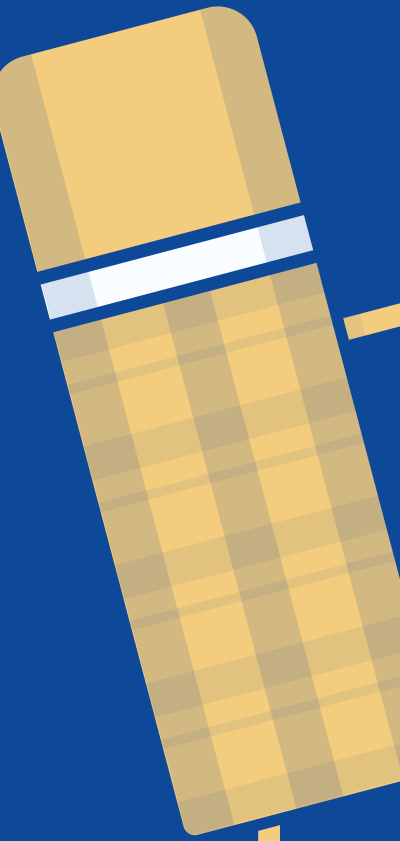
EXAMPLE

IDENTIFY THE KEY CONCEPTS IN YOUR RESEARCH TOPIC:

How has the disposal of plastic impacted the marine environment?

PULL OUT MAIN POINTS OUT OF THE RESEARCH QUESTION TO FIND THE SEARCH TERMS:

Disposal, plastic, impact, marine environment

LOOK UP OTHER RELATED WORDS E.G. PHRASES OR SYNONYMS:

Disposal = removal, destruction, dumping;
Impact = influence, burden;
Marine environment = marine habitat; sea; water

1 RUN A SEARCH USING SEVERAL RELEVANT KEYWORDS.
BROWSE THE RESULTS AND CHOOSE 2 OR 3 THAT ARE RELEVANT.

2 LOOK AT THE KEYWORDS THAT WERE USED BY AUTHORS TO DESCRIBE THE CONTENT OF THE ARTICLES.

3 READING GENERAL ARTICLES ABOUT YOUR TOPIC
WILL GIVE YOU IDEAS FOR MORE KEYWORDS THAT YOU COULD USE

4 USE SUBJECT HEADINGS PROVIDED BY THE DATABASE TO NARROW DOWN YOUR RESULTS
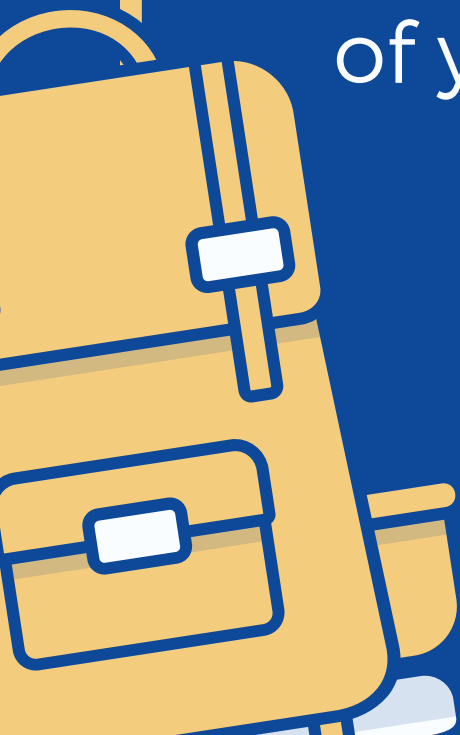
BOOLEAN OPERATORS

AND
Use AND to retrieve all of your search terms

OR
Use OR to broaden your search by connecting two or more synonyms

NOT
Use NOT to exclude a term(s) from your search results

AND

AND will narrow your search results to include only relevant results that contain your required keywords.

- F**ood AND Attitude**

In the example above, the Boolean string will only return results that include both the keyword 'food' and the keyword 'attitude'. It will not display any results that contain only one of the defined criteria without the other.

OR (1)

OR will expand your search results so all results must contain at least one, if not more, of your defined keywords or phrases. OR is best used for one of two reasons:

1. to include all synonyms for a given title, phrase or word

- **MBA OR M.B.A. OR "Masters of Business Administration"**
- **Climate OR Weather**

Remember, there can be multiple words that mean the same thing. OR allows you to expand your search to include all relevant results for all possible variations with the same meaning

OR [2]

2. creating a list of all possibilities where you only need at least one of the keywords to be returned

- **Apple OR Microsoft OR Google**

In the example above, the OR statement is used to identify result that contain at least one of the listed companies.

NOT

NOT limits your search by excluding defined keywords and/or phrases from your results.

- **Malaria NOT Africa**

In the example above, all results will contain the keyword 'Malaria' but not the word 'Africa.' NOT is particularly useful when you want to filter out particular terms from your searches.

QUOTATION MARKS " "

Quotation marks are used around a phrase that needs to be returned in that exact order.

- **"human resources"**

In the example above, the search will only return results that contain the exact phrase 'human resources.' If you do not use quotation marks around phrases, each word in the phrase will be treated separately as if you used AND between each word. Without th " " the search will display results that contain the words 'human' and 'resources' but not necessarily in that order.

PARENTHESES ( )

Parentheses are used to give priority to the keywords contained within over the other elements around it. As a rule of thumb, parentheses should be used around OR statements, ensuring the search engine properly resolves the OR statement before moving on to other operators.

- **(Apple OR Microsoft OR Google) and "marketing manager"**

In the example above, the search will return results that contain at least one of the keywords within the parentheses as well as the phrase 'marketing manager.'

TRUNCATIONS

?

ENTER A **QUESTION MARK** TO PERFORM A SINGLE CHARACTER WILDCARD SEARCH.

Example:

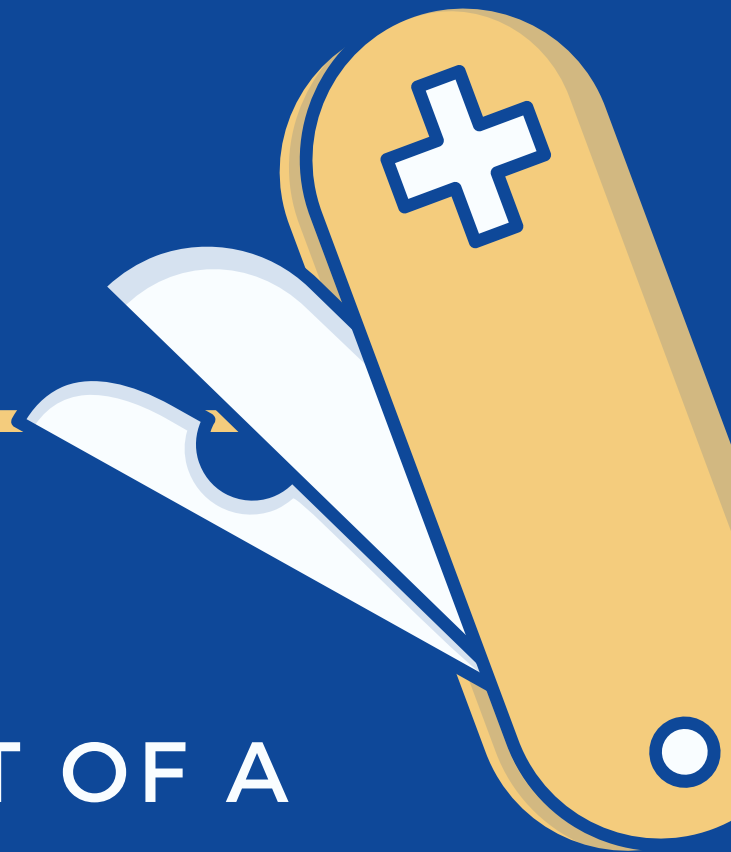wom**?**n = woman, women

colo**?**r = color, colour

*

ENTER THE ROOT OF A WORD AND PUT THE * AT THE END.

Example:

cultur* = culture, cultural, culturally

dilpoma* = diplomacy, dilpomatic, diplomats

WHERE TO START SEARCHING?

GOOGLE? OR GOOGLE SCHOLAR?

Good for general searches to give you some insight or background information

HYDI?

Ideal for retrieving academic results and provide in depth research and resources

DATABASES?

Used for specific subject research, systematic reviews and more specialized results

INFORMATION LITERACY

EVALUATING INFORMATION SOURCES

Investigating a source's authority

The author/s professional background

The process they used to produce that information

The systems that are in place to catch mistakes

Leaving a source to better understand the source

Stop.
Think.
Look Arround.

Lateral Reading

The act of verifying what you are reading as you are reading it

Using tabs to research sources and keep original searches or results easily accessible

UNDERSTANDING WHERE THE INFORMATION COMES FROM, HELPS US UNDERSTAND IF A SOURCE IS RELIABLE OR NOT.

ALL INFORMATION IS CREATED BY SOMEONE FOR A PARTICULAR PURPOSE.

SO ALWAYS ASK YOURSELF,
WHO CREATED THE INFORMATION AND WHY?

USE OTHER TOOLS TO FIND INFORMATION ON THE CREATORS OF YOUR SOURCES - GOOGLE, GOOGLE SCHOLAR, NEWSPAPER ARTICLES, OTHER PUBLICATIONS BY THE SAME AUTHORS, ETC...

CHECK THE SOCIAL MEDIA ACCOUNTS OF THE SOURCE'S CREATORS. THIS GIVES YOU AN IDEA OF ANY PERSPECTIVES THAT MIGHT CREATE BIASES IN THEIR INFORMATION.

MAKE A DISTINCTION BETWEEN FACTS AND OPINIONS.

ANALYSES, REVIEWS, PERSPECTIVES, COMMENTARIES, BLOG POSTS, EDITORIALS ARE ALL OPINION PIECES (SECONDARY SOURCES)

RESEARCH PAPERS, NEWS REPORTS, STATISTICS, CASE STUDIES, ARE LITERATURE THAT DEALS IN FACTS (MOSTLY PRIMARAY SOURCES)

How recent is this information?

A good way to evaluate information is to look at when it was created.

Consider searching for information about AI. Which resource is the most relevant?

BOOK

Published in 1997

RESEARCH PAPER

Published 3-4 years ago?

DOCUMENTARY

Released last year

Does it provide references?

IS THERE A BIBLIOGRAPHY?

Does the information cite other sources?
Can you go to those sources and verify?
Are the citations linked and legitimate?

WHO CREATED THE INFORMATION OF THE CITED SOURCE?

In Summary: Spotting Fake News

WHO WROTE IT?

Real news contains the real byline of a real journalist dedicated to the truth. Fake news (including "sponsored content" and traditional corporate ads) does not.

Once you find the byline, look at the writer's bio. This can help you identify whether the item you're reading is a reported news article (written by a journalist with the intent to inform), a persuasive opinion piece (written by an industry expert with a point of view), or something else entirely.

Spotting Fake News

WHAT CLAIMS DOES IT MAKE?

Real news — like Pulitzer Prize winning articles — will include multiple primary sources when discussing a controversial claim. Fake news may include fake sources, false urls, and/or "alternative facts" that can be disproven through further research. When in doubt, dig deeper. Facts can be verified.

Spotting Fake News

WHEN WAS IT PUBLISHED?

Look at the publication date. If it's breaking news, be extra careful.

WHERE WAS IT PUBLISHED?

Real news is published by trustworthy media outlets with a strong factchecking record, such as the BBC, NPR, ProPublica, Mother Jones, and Wired. If you get your news primarily via social media, try to verify that the information is accurate before you share it

Spotting Fake News

HOW DOES IT MAKE YOU FEEL?

Fake news, like all propaganda, is designed to make you feel strong emotions. So if you read a news item that makes you feel super angry, pause and take a deep breath. Then, double check the item's claims by comparing it to the news on any other media outlet — and decide for yourself if the item is real news or fake news.

Use this tipsheet to decode Fake news:
https://fakenewstipsheet.wordpress.com/
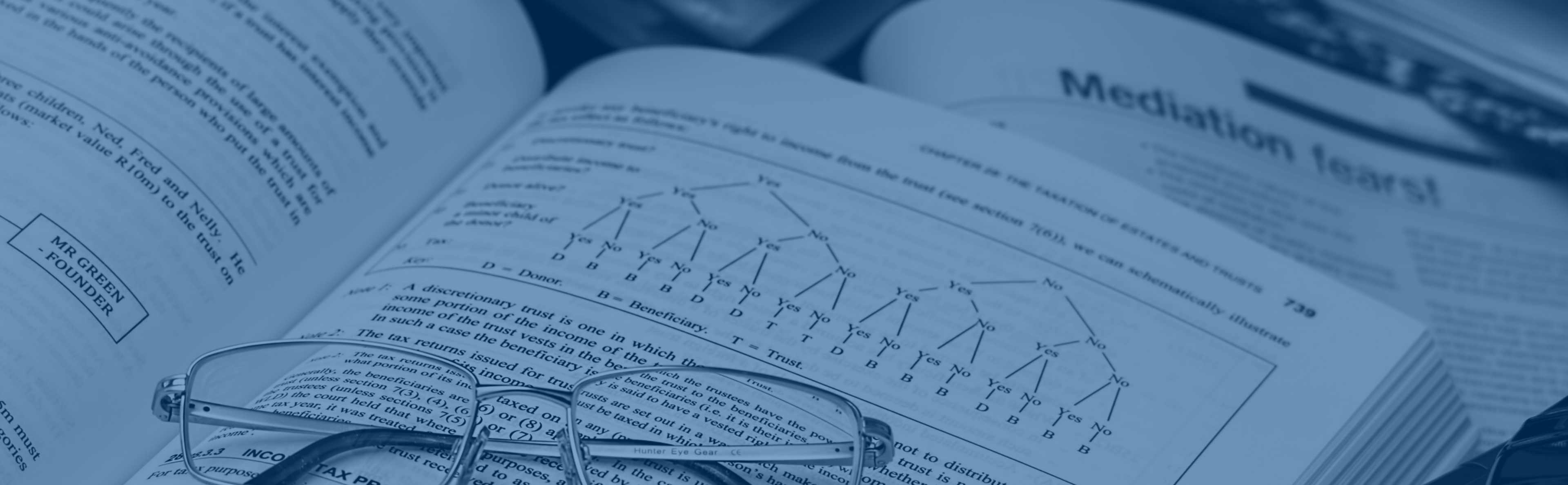
Always be skeptical
Always ask for more details
Question the source and motivation

Bottom line: Don't believe everything you read.
There is no substitute for critical thinking.

Examples: Are these reliable?

GOOSE THINKING OF MIGRATING HOME A COUPLE WEEKS EARLY TO AVOID THE CROWDS

https://cutt.ly/MedftZk

ASSOCIATIONS BETWEEN BODY COMPOSITION AND HELMINTHS OF LESSER SNOW GEESE DURING WINTER AND SPRING MIGRATION

https://cutt.ly/Nedftfk

UM PARKING REGULATIONS

https://cutt.ly/redfrcD

Add references to your work!

Use RefWorks

Usefull links:

Lyons, K. (2019). Start your research: Evaluate your info.
Retrieved from
https://guides.library.ucsc.edu/writing/evaluate

Wadson, K. (1019). LibGuides: Evaluate your sources.
Retrieved from
https://bowvalleycollege.libguides.com/researchhelp/evaluation

QUESTIONS? COMMENTS?

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