


MODERN DIGITAL SKILLS



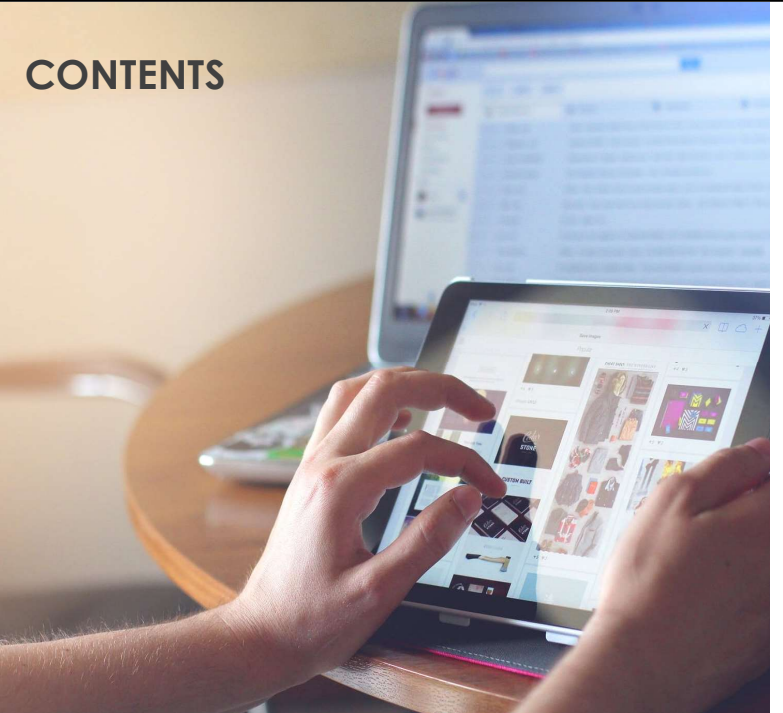
CHAPTER 2: INFORMATION AND DATA LITERACY

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1. Literacy in the digital age
2. Data literacy Vs Information Literacy
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Literacy in the digital age

Literacy

- It is the ability to:
 - read, write and understand various forms of communication.
 - access, understand, evaluate, analyze and use information

The importance of Literacy :

- It enables you to
 - make decisions
 - participate in the communities,
 - Keep track of opportunities for growth.

Types of Literacy

Critical literacy

Computer literacy

Copyright literacy

Information Literacy

Data literacy

Disaster literacy

Financial literacy

Health literacy

Media literacy

Visual literacy

Web literacy

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Data literacy Vs Information Literacy

- Recall that:**
- **Data:** Raw facts that are collected and used for analysis and decision-making
 - **Information :** Data that has been processed (meaningful data)

Data literacy

the ability to:

read, write and communicate data in context

analyze data through **statistical tools** and use the data in **decision making** processes and reports.

understand privacy and the ethical use of data

Information literacy

the ability to:

find, evaluate, interpret, use and apply relevant information to situations that require decision making, problem solving, or acquisition of knowledge.

identify a need for certain information for a given problem or task

manage and ethically share that information for appropriate purposes

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Where to find data and information?

Search Engines

- **Google:**
 - Google search
 - Search tools
 - Advanced search
 - Google image
 - Google scholar
- **Microsoft**
 - Bing

Encyclopedia

- Wikipedia

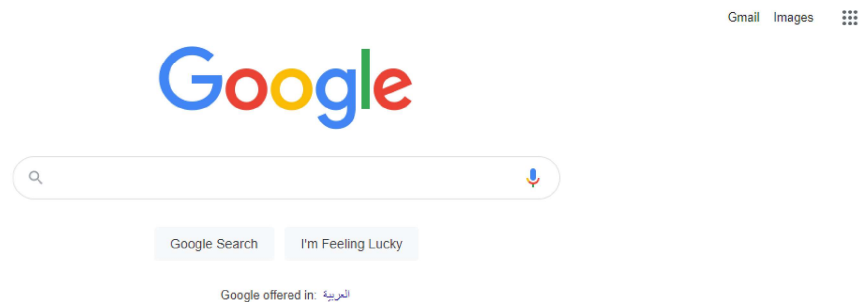
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Google search

The most famous search engine is Google, you visit it from the following URL :

www.google.com

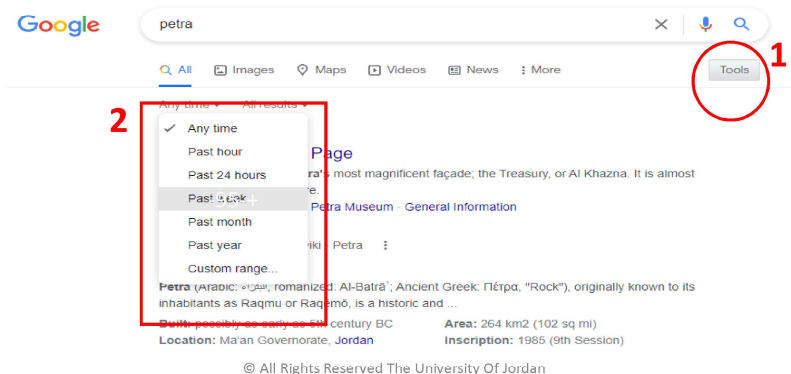


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Google search Hacks: search by time

- You can specify the time of your search results, to do this:
 - Write the keyword that you are searching for in the search textbox
 - Click on (tools) button
 - Select the time you want from: (Anytime) list box



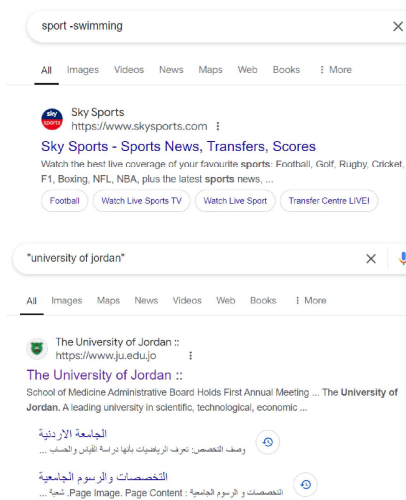
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Google search Hacks: Search characters

There are many categories of Google search operators:

- **Subtraction (-)** (Negative Symbol):
 - Used to **Exclude** some results from the search
 - Example:**
 - To search for (sport), but not (swimming):
sport -swimming
- **Exact search (" ")**
 - Used to give the **Exact result**.
 - Example:**
 - To display results of (university of Jordan) and all other universities in Jordan:
university of Jordan
 - To display results of (university of Jordan) only:
"university of Jordan"



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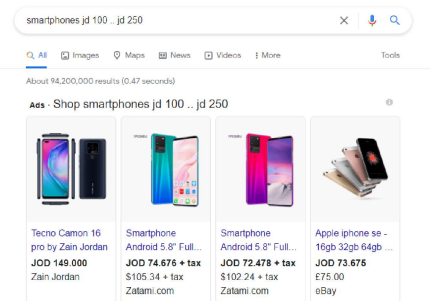
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Google search Hacks: Search characters

➤ Range of Numbers (..)

- Used to determine range of numbers: (from .. to ..)
- **Example:**
 - To show results of smartphones with prices from (100 – 250 JD).

• [smartphones jd 100 .. jd 250](#)

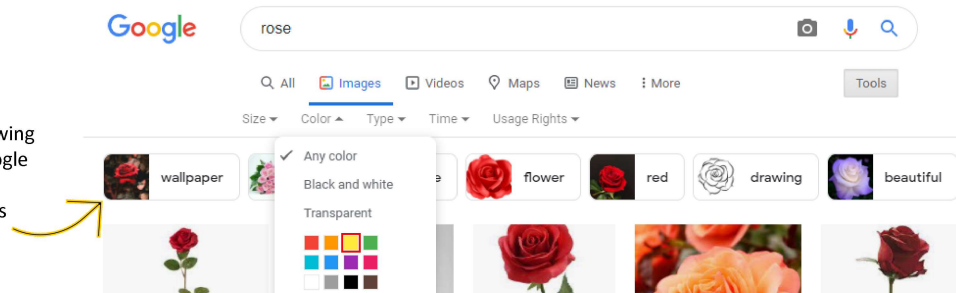


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Google search Hacks: Image search tools

- To search for images of (roses) in Google, do the following:
 1. Write the keyword (rose) in the search textbox
 2. Click on (Images)
 3. click on (tools) options
 4. Select the size, color and time.

In the following search, Google will display yellow roses



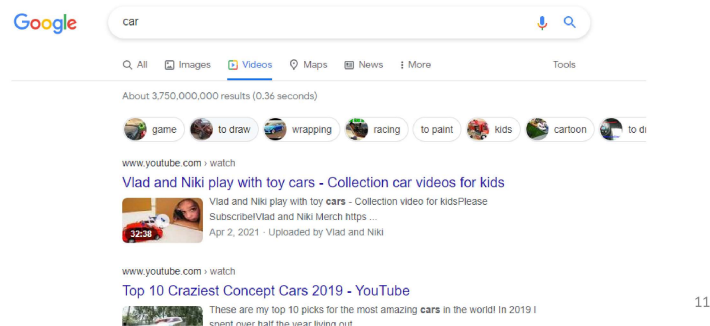
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Google search Hacks: Video search tools

Example:

- To search for videos about (car) drawing tutorials, do the following:
 - Write the keyword (car) in the search text box,
 - Select (videos) options



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Google Advanced search

Advanced Search is used to search for pages in terms in the whole page, page title, or web address, or links to the page you're looking for.

Use Google advanced search from the following URL:

https://www.google.com/advanced_search

Example: Suppose you want to search for the following:

- Pages about (Animals)
- these animal should be rabbits, dogs or cats
- these animals shouldn't be fish
- the results should have ppt format (power point file)
- You don't want google to display non appropriate results

- Open Google Advanced search and fill the options as follows:

- all these words:** Animals
- Any of these words:** dogs, cats, rabbits
- None of these words:** fish
- File format:** ppt

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Google Advanced search

Find pages with...	To do this in the search box.
all these words: <input type="text" value="animals"/>	Type the important words: tri-colour rat terrier
this exact word or phrase: <input type="text"/>	Put exact words in quotes: "rat terrier"
any of these words: <input type="text" value="cats, dogs, rabbits"/>	Type OR between all the words you want: miniature OR standard
none of these words: <input type="text" value="fish"/>	Put a minus sign just before words that you don't want: -rodent, -"Jack Russell"
numbers ranging from: <input type="text"/> to <input type="text"/>	Put two full stops between the numbers and add a unit of measurement: 18..35 kg, £300..£500, 2010..2011

Then narrow your results by...

language: <input type="text" value="any language"/>	Find pages in the language that you select.
region: <input type="text" value="any region"/>	Find pages published in a particular region.
last update: <input type="text" value="anytime"/>	Find pages updated within the time that you specify.
site or domain: <input type="text"/>	Search one site (like wikipedia.org) or limit your results to a domain like .edu, .org or .gov
terms appearing: <input type="text" value="anywhere in the page"/>	Search for terms in the whole page, page title or web address, or links to the page you're looking for.
SafeSearch: <input type="text" value="Hide explicit results"/>	Tell SafeSearch whether to filter sexually explicit content.
file type: <input type="text" value="Microsoft PowerPoint (.ppt)"/>	Find pages in the format that you prefer.
usage rights: <input type="text" value="not filtered by licence"/>	Find pages that you are free to use yourself.

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Google images

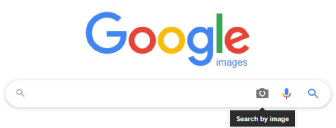
- If you have a picture of a person or place and don't know who or what it is, use (Google Images) to search for it.

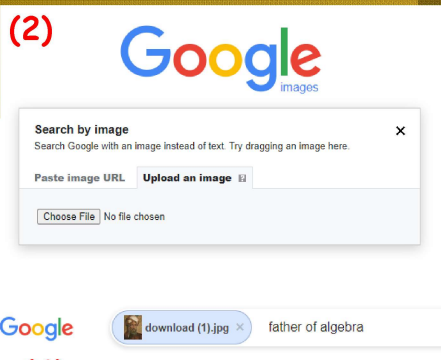


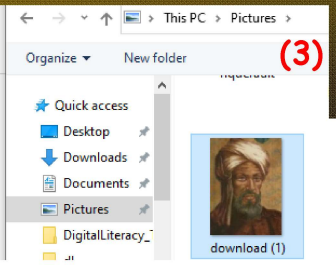
- Example :** To search for the following Image, follow these steps:
 - Open (Google Image) from <https://www.google.com/imghp?hl=en>
 - Click on the Camera icon
 - Choose (upload an image) and click on (choose file)
 - Select the image from your device
 - Google will display the possible related results to the selected image, which is in this example: the father of Algebra: Alkhawarizmi




Google images

(1) 

(2) 

(3) 

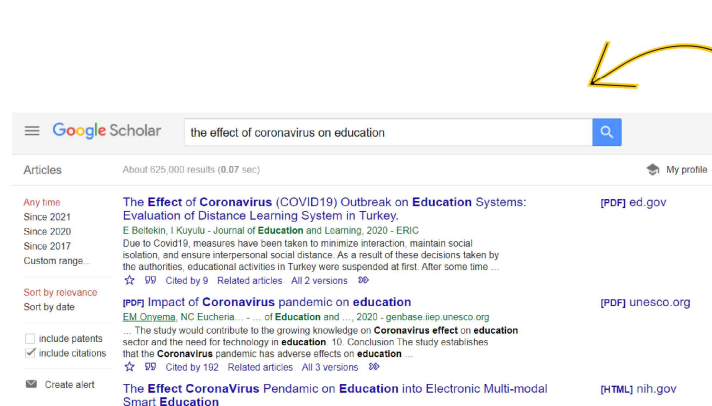
(4) 

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Google Scholar

GOOGLE SCHOLAR helps in your research because it provides a professional way to search for scientific research papers, books, and scientists.



Articles About 625,000 results (0.07 sec) My profile

Any time Since 2021 Since 2020 Since 2017 Custom range

Sort by relevance Sort by date

include patents include citations

Create alert

The Effect of Coronavirus (COVID19) Outbreak on Education Systems: Evaluation of Distance Learning System in Turkey. [PDF] ed.gov
E Beltekin, I Kuyulu - Journal of Education and Learning, 2020 - ERIC
Due to Covid19, measures have been taken to minimize interaction, maintain social isolation, and ensure interpersonal social distance. As a result of these decisions taken by the authorities, educational activities in Turkey were suspended at first. After some time ...
☆ 99 Cited by 9 Related articles All 2 versions

Impact of Coronavirus pandemic on education [PDF] unesco.org
EM Özgenç, NC Euchen - ... of Education and ... 2020 - genbase-ies.unesco.org
The study would contribute to the growing knowledge on **Coronavirus effect on education** sector and the need for technology in **education**. 10. Conclusion The study establishes that the **Coronavirus** pandemic has adverse effects on **education** ...
☆ 19 Cited by 192 Related articles All 3 versions

The Effect CoronaVirus Pandemic on Education into Electronic Multi-modal Smart Education [HTML] nih.gov

Example: To look for research papers about the effect of COVID pandemic on education:

1. Open Google scholar from: <https://scholar.google.com/>
2. Write the keyword: (the effect of corona pandemic on education) on the search button

Google Scholar

By using Google Scholar:

1. You can download the PDF version of the research
2. You can specify the research publication time or relevance
3. You can also see the citation and versions

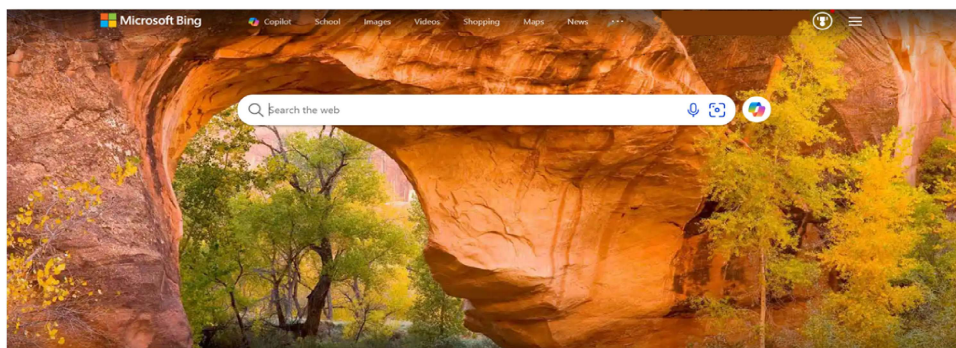
The screenshot shows a Google Scholar search for "the effect of coronavirus on education". The search results are displayed in a list format. The first result is "The Effect of Coronavirus (COVID19) Outbreak on Education Systems: Evaluation of Distance Learning System in Turkey." by E. Beltekin and I. Kuyulu, published in the Journal of Education and Learning in 2020. This result is highlighted with a red box and labeled with a '1'. To the right of the search bar, there is a filter menu with options: "Any time", "Since 2021", "Since 2020", "Since 2017", and "Custom range...". This menu is highlighted with a red box and labeled with a '2'. Below the search results, there are options for "Sort by date", "include patents", "include citations", and "Create alert". A red arrow points from the "Cite" button in the top left to the citation information for the first result, which is labeled with a '3'. The citation information includes the authors, title, journal, and year. The search results also show the number of citations and related articles for each result. The bottom of the page has a copyright notice: "© All Rights Reserved The University Of Jordan" and the number "17".

Bing

Microsoft search engine

- **Microsoft Bing** is a search engine (similar to Google search)
- It is used to search for pages, maps, news, images and videos.

<https://www.bing.com/>



Wikipedia

Wikipedia is a free content, multilingual online encyclopedia written by volunteers through open collaboration, using a wiki-based editing system.



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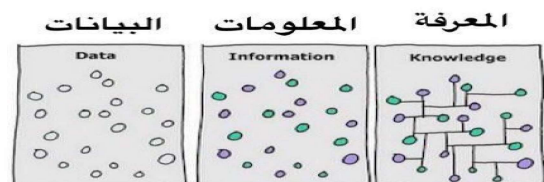
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Credibility of Information on Internet

- Internet users can access many resources for information.
- Some users get their information from resources like social media platforms (such as Facebook, X (Twitter), TikTok, and others).

Knowledge is created by processing and interpreting **information** from **raw data**.

- If the **data is inaccurate** or false, the resulting **information will be incorrect**.
- Relying on **incorrect information** can cause serious problems because they will result in **False knowledge**.



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Critical information literacy: Pause before you share!

There are three categories of **Information disorder**:

1. *Misinformation*
2. *Disinformation*
3. *Mal information*

Critical information literacy: Pause before you share!

Misinformation: False but spread without intent

Misinformation : sharing **inaccurate and misleading information** in an **unintentional** way, like false rumors



Critical information literacy: Pause before you share!

Disinformation: False and spread with intent

Disinformation : Deliberate sharing false or inaccurate information to discredit a person or organization.



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Critical information literacy: Pause before you share!

Mal information: Correct and spread with intent to cause mislead

Mal information : information that is accurate and based on reality, but it is used with the intent to cause harm or mislead a person, organization or country.



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