TOOL - ONLINE RESEARCH

INFORMATION AND DATA LITERACY > 1.1 BROWSING, SEARCHING AND FILTERING DATA, INFORMATION AND DIGITAL CONTENT

TARGET GROUP	AGE GROUP	PROFICIENCY LEVEL	FORMAT	COPYRIGHT	LANGUAGE
Facilitators	N/A	Level 1	Preparatory guide	Creative Commons (BY-SA)	English, French

This document contains background information for facilitators before they run the workshop with participants. It helps understand the difference between the internet and the world wild web, a search engine and a browser, and also gives tips on indexing.

General Objective	Skillset building
Preparation time for facilitator	less than 1 hour
Competence area	1 - Information and data literacy
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WORKSHOP DIRECTIONS

1 Internet and Web

Internet and the web, what's the difference?

We often think wrongly that the terms internet and the web refers to the same thing. These are actually two different things. Internet refers to an information network linking computers, allowing them to communicate. A predecessor to the internet, entitled ARPANET, was developed in the 1960's by the US army. This helped universities and research labs to communicate.

Today, the internet allows us to access a number of services such as the web (i.e. world wide web). The web is a service whereby sites can be visited using browsers installed on computers.

How to connect to the internet and go on the web

In order to connect to the internet you will need to have access to WiFi or have a subscription to an internet provider. Using the internet, you will be able to navigate the web via your computer, phone or tablet.

2 Browser vs search engine

As with the confusion between internet and web, we often tend to confuse the meaning of a browser and search engine. It is important to make the distinction between these two tools.

First, the web browser. Simply put, this is a tool we install on our devices which we use to access the web. There are a number of browsers to choose from, such as: Chrome, Edge, Firefox, Opera, Safari, Brave, Vivaldi. It's up to you to choose which is right for you.

As for the search engine, this is like a massive directory which indexes and categorises all websites that exist. Search engines can be used to locate and access information rapidly and efficiently.

While by far the most popular website is Google (86% of the search engine market as of April 2020), there are many others, for example: Bing, Yahoo, Ecosia, Qwant and Lilo. Each one has features unique to them. Here again: which one to use is up to you.

There are search engines which donate large portions of their revenue (coming mainly from advertising) to nonprofit organisations in support of causes such as environmentalism. This is the case with Ecosia for example, a Germany-based search engine which gives 80% of their profits to reforestation efforts. The tree planting initiates it supports primarily takes place in Burkina Faso, Peru, Tanzania and Madagascar. For more information on the subject, see the blog.

The founders of Lilo dedicate half of their ad revenue to various organisations who support social and environmental projects. You can choose which projects you would like to support here.

To summarise: a web browser is like a boat that transports you, whereas the search engine is the compass that tells you where to go.

3 How search engines work

Indexation

How can search engines know so many sites? This is made possible by indexation. As soon as a site is created, bots analyse its content and store it in a web directory (or index). In this way, search engines know this new site exists and know everything it contains.

As a result, instead of needing to search countless sites yourself to find the information you're looking for, search engines save you time by doing the work for you. They choose the results (images, videos, webpages, articles…) most relevant to your search terms by searching their indexes. It is as if millions of tiny robots search every corner of the internet to find information that they then sort by relevance.

Why do I receive different results to my friend even when we search for the same thing?

You should be aware that as part of the process of giving you those most relevant responses, search engines use an algorithm based on:

- User habits in general: the more a site is visited globally, the more likely it will be that it is placed in the highest positions of your search results

- Your personal habits: the keywords you search for most regularly, the sites you visit most often, your native language, your geographical location, your preferences, etc.

This is what we call ‘page ranking’. It is possible as a result of all the traces you leave while browsing the web. For more information, see the sheet ‘Personal Data and Digital Identity‘.

There is also another way for a page to appear in high positions in user search results: pay the search engines.

How do we avoid missing out on certain information due to these algorithms?

There are various ways to do this, but the quickest and simplest is to use what we call a metasearch engine. The objective of this is to consult multiple search engines and display the results on the same interface. Essentially, this helps you to avoid needing to search individually on several search engines and crosscheck the results. Here again, there are several examples: DuckDuckGo, Startpage, Youcare…

4 Tips for effective online research

There are several basic rules for searching effectively and find answers to your queries. We will now give you some tips.

First, be aware that search engines first analyse keywords. It is therefore important to choose your keywords carefully. For this, think about what you really want to know, and also about what you don’t need to know.

Basic advice

- Don’t worry about capitalising letters.
- Don’t worry about spelling. Even there is an error, the search engine will know what you mean.
- Don’t worry about insignificant words: articles, pronouns, transitions words….

Advanced advice

- To research an exact match, use quotation marks, for example ‘architecture prize, 2019’
- To exclude keywords from your search, use the symbol ‘-‘. For example, ‘musician-sufjan-stevens’
- To add a key word to your search, use the symbol ‘+’
- To search exclusively for a PDF, include in your search ‘filetype:pdf’
- To search for a particular site, include in your search ‘site: [name of site]’. For example, ‘site:wikipedia.org’

Finally, see this video which goes into further detail on the subject.