

Practical tools for teachers to deal with information disorder



Building Democratic Culture in schools empowering teachers as defenders of democracy

Saturday 1 – Sunday 2 February 2020

PhD Kari Kivinen

# FaktaBaarieu





Helsingin ranskalais-suomalainen koulu Lycée franco-finlandais d'Helsinki

# FaktaBaarieu

The FaktabaariEDU project brings together fact-checking experts, journalists, media specialists and pedagogues to create internet literacy tools:

- 1. to support teachers in dealing with social media issues in the classroom context ;
- 2. to activate students to verify their social media content empowered with critical thinking and information literacy skills to resist mis- and disinformation.

#### Finnish core curriculum

- According to the new core curriculum, all the Finnish schools should provide their pupils basic competences to use information independently and in interaction with others for problem-solving, argumentation, reasoning, drawing of conclusions and invention and they should have opportunities to analyse the topic being discussed critically from different viewpoints.
- The pupils should be able to know where and how to search for information and they should be able to evaluate the usability and reliability of sources.
- The schools should support the pupils' growth into active, responsible, and enterprising citizens.
- (National Core Curriculum for Basic Education 2014, Finnish National Board of Education, Publications 2016:5, Helsinki.)



## An information-literate person is able to

- Determine the extent of information needed
- Access the required information effectively and efficiently
- Evaluate information and its sources critically and incorporate selected information into his/her knowledge base and value system
- Use information effectively to accomplish a specific purpose
- Understand many of the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

• Susie Andretta, Information Literacy: A practitioner's Guide, Chandos publishing.



### Information literacy toolkit elements

- Where do you get your news and information from? Analysing the media environment of teachers and students
- Principles of good and ethical journalism
- Reliability of information
- What is true?
- Science> opinion
- Classification of misleading information Mis-, dis- and malinformation
- Useful checklists
- Confusing contents
- Algorithm awareness search engines and social bubbles
- Tools for verifying the authenticity of the photos and videos
- Privacy and ethical reflection about our digital footprint what do I want others to know about myself?

## QUICK QUESTIONNARY by Mentimeter

- 1. Go to the site <u>https://menti.com</u>
- 2. Type the following number: 36 24 29

Easy-to-use presentation software for leaders, educators, and speakers that's interactive, engaging and fun

<u>https://www.mentimeter.com/</u>

#### Social media is an essential part of the life of youngsters

## Social media services have brought to my life

	Disagree	Agree
Friends	30 %	70 %
Peer support	28 %	72 %
Feeling of togetherness	23 %	73 %
Information on interesting		
subjects	6 %	94 %
Way to spend time	5 %	95 %
Sorrow	47 %	53 %
Happiness	7 %	93 %

https://www.ebrand.fi/somejanuoret2019/ N=6247 Year 2019



#### Social media use/scene of youngsters

Finnish study on media use of Finnish youngsters aged 13-29 N=6247

- Average use of social media 15 - 20 hours weekly mainly during 15-01
- The most popular time is • between 18-21.
- The most popular services • are WhatsApp, YouTube, Instagram, Snapchat, Spotify and Facebook.



#### ETHICAL GUIDELINES FOR JOURNALISTS



A journalist is primarily responsible to the readers, listeners and viewers, who have the right to know what is happening in society...

- The journalist must aim to provide truthful information.
- Information obtained must be checked as thoroughly as possible, including when it has been published previously.
- The public must be able to distinguish facts from opinions and fictitious material. Similarly, photographic and sound material must not be used in a misleading manner
- Information sources must be approached critically. This is particularly important in controversial issues, since the source of the information may be intended for personal gain or to damage others.

### Science > opinion

- Unfortunately, in social media, science and opinion are sometimes equated.
- A scientific theory is not just a matter of opinion but is based on a proven and valid view
- The task of science is to explain the surrounding world and its phenomena.
- Scientific research is the systematic and rational acquisition of new knowledge, but also the building on earlier scientific knowledge and the verification of explanations and predictions.
- Scientific evidence-based policy has been acquired by proven empirical or experimental methods and confirmed or refuted by repeated studies and often authorized by peer review.



Science is the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence.

https://sciencecouncil.org/about-science/our-definition-ofscience/

## Pseudoscience ≠ science

- We often come across misuse of science pseudoscience.
- Products are marketed with misleading or non-existent references to various studies.
- Social media disseminates articles of scientific quality.
- Particular attention should be taken when reading articles on health and wellbeing

https://healthfeedback.org/the-most-popularhealth-articles-of-2018-a-scientific-credibilityreview/?fbclid=IwAR0VgQeQQ3j0e\_pVB2SVhhzVE YjjZA78ntAM\_YWTQaet2W951082urQ0Sjo 🕵 Неа

Health Feedback Article Reviews Claim Reviews Insights Support us

### The Most Popular Health Articles of 2018, a Scientific Credibility Review



#### Description of mis-, dis- and mal-information



**Mis-information -** false information is shared, but no harm is meant.

**Dis-information** - false information is knowingly shared to cause harm.

Mal-information - genuine information is shared to cause harm, often by moving information designed to stay private into the public sphere.

#### Workshop: Role game – Pitch with a twist

- 1. Create your own campaign to support something close to your heart or protest against something
- 2. Give a name and slogan to your campaign
- 3. Develop at least 3 statements to support your campaign
- 4. One of claims should be misinformation or disinformation
- 5. Pitch your campaign idea to others (max 2 min)

- Do you recognize the mis- or disinformation the other teams are feeding you?
- Discussion about the exercise.



#### Fact-checking codes

- Fact-checking denotes a process of research that strives to gain a thorough understanding of the truthfulness or likelihood of, for instance, a claim made in public.
- Fact-checking has branched out beyond journalism, however, and plenty of civic activism has developed globally in conjunction with it.
- Specific codes of principles have been developed for factchecking (e.g. IFCN) which seek to distinguish between proper fact-checking (which aims for objectivity) and other investigative journalism dealing with facts.
- More: <u>https://ifcncodeofprinciples.poynter.org/</u>







#### Traffic lights: true, untrue or "50/50"



• A **true** claim holds true in the context and there are sources to support it. But since fact-checking deals with very specific contexts, the claim can still be untrue in another context.



 An untrue claim is clearly false, i.e. the source material and the expert statements are at odds with it. The claim can be either a deliberate lie or simply a careless slip: fact-checking may not be able to pinpoint the motivation behind the claim.



- A **50/50** claim includes factual information but it cannot be regarded as completely accurate. This is especially common in the case of over-simplified views. For example, if an expert states that the claim cannot be either verified or refuted or that it is considered ambiguous or the source material is conflicting, the verdict is usually 50/50. So it is not a matter of being 'half true', but rather about not being entirely verifiable or certain.
- There are naturally claims that simply cannot be checked or the verification wouldn't be meaningful from the point of view of public debate.

## **FactCheckN**

## Are there 40,000 third-level students in the northwest of Ireland?

Posted on 21 November 2019



CLAIM: There are 40,000 third-level students in northwest Ireland, with 7,000 graduates annually ready for employment.

CONCLUSION: INACCURATE. Available data shows 9,370 third-level students in northwest Ireland, with approximately 3,300 graduates a year in the region. The Ireland Northwest Trade & Investment mission may have included figures for Ulster University Coleraine, which is outside the geography covered by the partnership. Even so, the claim is a large overestimation. CONTINUE READING

### Has levy removed 1.2 billion carrier bags?

Posted on 5 December 2019



CLAIM: There are 1.2 billion fewer carrier bags distributed in Northern Ireland since the introduction of the carrier bag levy in 2012.

CONCLUSION: ACCURATE: Data from annual reports from the Department of Agriculture, Environment and Rural Affairs (DAERA) calculates a cumulative reduction of the dispensing of 1,230,620,479 carrier bags. CONTINUE READING

Posted in Economy, Elections, Environment Tagged environment, Northern Ireland, plastic, tax

#### Thousands of tonnes of slurry for pork for China?

Posted on 16 September 2019



CLAIM: Thousands of tonnes of slurry are being spread on farmland, all due to exporting pork to China, according to Channel 4 News.

CONCLUSION: UNSUBSTANTIATED. The export of 1,450 pigs would represent 1,000 tonnes of slurry (based on an estimate of 957,495 tonnes p.a.). Tonnage figures for pork exports from Northern Ireland are unavailable. A secondary claim that "there'll soon be as many pigs as people in Northern Ireland" is inaccurate; there were 633,600 pigs in 2018 and the mid-year 2018 population of Northern Ireland was 1,881,600. CONTINUE READING

Posted in Economy, Facts Tagged agriculture, China, economy, environment, fact check,

Posted in Economy, Education, Facts Tagged economy, education, fact check, Ireland,

## Greta has done her science homework

- February 2019 the Swedish climate activist Greta Thunberg (16) delivered a strong speech in Brussels before EU elections. Thunberg teamed up with IPCC science and scientists and encouraged politicians to take urgent action to combat climate change.
- Thunberg said that politicians should listen to scientists and "follow the Paris agreement and the IPCC reports".
- Her speech contained four sciencebased claims that lasted scrutiny of two independent top scientists Professors Ollikainen (University of Helsinki) and Breyer (LUT University).
- Faktabaari stated: Accurate

https://faktabaari.fi/greta-thunberg-has-done-herscience-homework/



#### Fact-checking process in a school



- Select a claim that you want to check in a group
- 2. Examine the claim using different sources and check the facts
  - Who, where, when and what said?
- 3. Write a fact-checking report based on the discoveries
- Present your findings ("True, "False" or "50/50")
- 5. Publish and share the results, e.g. as a blog text or a presentation paper





#### Simple checklist

It would be good to ask certain questions before liking or sharing a suspicious piece of news:

- Who is the author ?
  - Can you find a name or reliable web address ?
- To whom it is made for?
  - Where has it been published first and to which target audience?
- What does it really say?
  - Is it an advertisement, a piece of news or opinion of someone?
- Why is it made?
  - To whom it is targeted. How did you get it?
- On what information it is based?
  - Can you find references?
- Are pictures authentic?
  - Is there a real link between the title, photo and text?
  - Would it be wise to check the origin of the photo/video?



propaganda (((	<ul> <li>adopted by governments, corporations and non-profits to manage attitudes, values and knowledge</li> <li>appeals to emotions</li> <li>can be beneficial or harmful</li> </ul>	partisan	<ul> <li>ideological and includes interpretation of facts but may claim to be impartial</li> <li>privileges facts that conform to the narrative whilst forgoing others</li> <li>emotional and passionate language</li> </ul>	IMPACT
clickbait	<ul> <li>eye catching, sensational headlines designed to distract</li> <li>often misleading and content may not reflect headline</li> <li>drives ad revenue</li> </ul>	conspiracy theory	<ul> <li>tries to explain simply complex realities as response to fear or uncertainty</li> <li>not falsifiable and evidence that refutes the conspiracy is regarded as further proof of the conspiracy</li> <li>rejects experts and authority</li></ul>	neutral low medium
sponsored content	<ul> <li>advertising made to look like editorial</li> <li>potential conflict of interest for genuine news organisations</li> <li>consumers might not identify content as advertising if it is not clearly labeled</li> </ul>	pseudoscience	<ul> <li>purveyors of greenwashing, miracle cures, anti-vaccination and climate change denial</li> <li>misrepresents real scientific studies with exaggerated or false claims</li> <li>often contradicts experts</li> </ul>	high MOTIVATION
satire and hoax	<ul> <li>social commentary or humour</li> <li>varies widely in quality and intended meaning may not be apparent</li> <li>can embarrass people who confuse the content as true</li> </ul>	misinformation ƏИОЯW YAW	<ul> <li>includes a mix of factual, false or partly-false content</li> <li>intention can be to inform but author may not be aware the content is false</li> <li>false attributions, doctored content and misleading headlines</li> </ul>	<ul> <li>money</li> <li>politics/power</li> <li>humour/fun</li> </ul>
error	<ul> <li>established news organisations sometimes make mistakes</li> <li>mistakes can hurt the brand, offend or result in litigation</li> <li>reputable orgs publish apologies</li> </ul>	bogus FAKE	<ul> <li>entirely fabricated content spread intentionally to disinform</li> <li>guerrilla marketing tactics; bots, comments and counterfeit branding</li> <li>motivated by ad revenue, political influence or both</li> </ul>	<ul><li>passion</li><li>(mis)inform</li></ul>

#### Group work Different types of misleading information

- Choose one type of misleading information, explore it and share your findings with others!
- <u>https://eavi.eu/wp-</u> content/uploads/2017/07 /beyond-fakenews\_COLOUR\_WEB.pdf



#### Disinformation awarness

- Most middle school students can't tell native ads from articles.
  - Most students could identify the traditional ad, but more than 80 percent of them believed that the "sponsored content" article was a real news story. ٠

SOARING-

EVALUATING INFORMATION: THE CORNERS

FD WITH THE SUPPORT OF THE ROBERT R. McCORM

OF CIVIC ONLINE REASONING

- Most high school students accept photographs as presented, without verifying them.
- Many high school students couldn't tell a real and fake news source apart on Facebook.
- Most college students didn't suspect potential bias in a tweet from an activist group.
- Most Stanford students couldn't identify the difference between a mainstream and fringe source.
  - Wineburg, Sam and McGrew, Sarah and Breakstone, Joel and Ortega, Teresa. (2016). Evaluating Information: The Cornerstone of Civic Online Reasoning. Stanford Digital Repository. https://stacks.stanford.edu/file/druid:fv751yt5934/SHEG%20Evaluating%20Information%20Online.pd

#### ALGORITHMS SHAPE WHAT WE SEE

- An algorithm is a computer program that does things in a specific order. At their simplest, algorithms make everyday and mechanical work easier, for example, by sorting simple information.
- Social media platforms provide us with targeted information through algorithms
  - In practice, this means that you see different information than everyone else. Facebook, YouTube, Twitter, Instagram and other social media platforms select the content you see based on your profile.
  - YouTube ads, Spotify music recommendations, and Netflix movie suggestions are all based on highly sophisticated algorithms.
  - Search engine results are also based on personal profiling and artificial intelligence-based algorithms that decide on targeted content.
- Algorithms can produce results that people cannot predict.
- Thus, the algorithm / artificial intelligence has the power to choose what kind of information is displayed to each individual and thus influences e.g. citizens' worldview and public opinion.

#### ALGORITHMS SHAPE WHAT WE SEE



- An algorithm is a computer program that does things in a specific order.
  - Famous algorithms include Google's PageRank and Facebook algorithm, which have both a lot of influence what content we will see.
- Algorithms can produce results that people cannot predict.
- Information algorithms determine what content is displayed to us at any given time.
- Thus, the algorithm / artificial intelligence has the power to choose what kind of information is displayed to each individual and thus influences e.g. citizens' worldview and public opinion.

#### YouTube recommendations as based on..



- Candidate generation network takes events from users YouTube history: number of videos watched, demographic information and search query tokens.
- The *ranking network* assigns a score to each video using a 'rich set of features describing the video and user'.
- This two-tiered system allows the system to handle millions of videos, but also scale down to individual users and provide them with meaningful content.

<u>https://towardsdatascience.com/using-deep-neural-networks-to-make-youtube-recommendations-dfc0a1a13d1e</u>

#### Group work Algoritmit & information bubbles

- Choose any word
- Make a search using your favorite search engine
- Compare your results!

**Reflections:** 

- What are the advantages of algorithms?
- What are the possible dangers of them?



#### Academic search engines

- Refseek academic search engine for students and researchers. <u>http://www.refseek.com/</u>
- Plos peer-reviewed articles are free to access, reuse and redistribute <u>https://www.plos.org/</u>
- Google Scholar academic articles

   not all of them will give you access to the full text https://scholar.google.co.uk/

Search...

 DOAJ (Directory of Open Access Journals) <u>https://doaj.org/</u>

**Europe PMC** 

**PLOS** 

- Europe PMC is an open science platform that enables access to a worldwide collection of life science publications and preprints from trusted sources around the globe <u>http://europepmc.org/</u>
- Public Library e-resources Joint your local public library and find out what online resources they have for you to access





#### Authenticity of the images



- Pictures and videos are now easy to edit.
- Image editing is normally harmless and useful for improving image quality.
- By trimming and editing images and videos, it is also possible to convey distorted information and to be used in misleading contexts.
- Social media nowadays often encounters images that are linked to a click title and texts that have nothing to do with the image.
- Fortunately, various tools have been developed to verify the origin and use of images and videos.

#### **GOOGLE reverse image search** – <u>https://google.com</u>

 Select Google Image Search in the top right corner and enter any image or image link in the search box. Google's algorithms quickly search for the context in which an image has been used and suggest similar images.

#### YANDEX - https://yandex.com/images/

 A Russian site that allows you to find a huge amount of similar images. Particularly good with faces, places and objects!

#### BING https://images.bing.com

• A specialty of BING is the visual search feature. You can narrow down what you are looking for in the image. This is especially useful if the image contains a lot of "useless" information for the search.

#### **INVID** - <u>https://www.invid-project.eu/tools-and-services/invid-verification-plugin/</u>

• INVID provides tools for verifying images and videos. Invid's tools work especially on YouTube, Facebook and Twitter. The downloadable InVID verification plugin to the browser is particularly effective.

#### Look at the mess today's climate protesters left behind in beautiful Hyde Park



- An estimated 300.000 Australians took part in protests against inaction on the climate emergency.
- Hours later, an Australian pro-coal page reposted the photo. It was captioned: "Look at the mess today's climate protesters left behind in beautiful Hyde Park."
- However, the photo is not from a climate strike, not from Friday and was not taken in Australia. It is from a marijuana-based festival called 420 held in London in April 2019.

#### Group work: How to lie with photos?

Choose one of the exercises. Use image search engines.

- 1. How can you lie with pictures? Can you find any examples?
- 2. The combination of image and text can be misleading. Can you find any examples?
- 3. Make the most clicky news possible with a compelling headline and an engaging image

#### Privacy

- Do you know, what is your digital footprint in the internet?
- Active / Passive

#### WHAT DATA DO INTERNET PROVIDERS COLLECT FROM YOU WHEN YOU BROWSE ONLINE?

Internet providers can collect your data without you being aware, sometime to improve your user experience, sometime to sell them to advertisers, and let them know:

Who you are
 Where you have been

Who you have been talking to, and
 What you are interested in

Sweden Sverige <u>milcucs</u>

**MIL Footprint (?)** Reviewing your digital footprints for MIL footprints <sup>32</sup>

#MILCLICKS

#### Manage the privacy settings on your computer

Cookies store plenty of information about you. They

- store your login state
- store preferences on websites
- allow websites to provide personalized content

Websites use cookies to remember and identify you.

Tracking cookies are used to track you across the web to target ads to you

Manage your online choices https://www.youronlinechoices.com/

Google has a good collection of information about you.

• Check your datapoints with

https://adssettings.google.com/

### First draft basic toolkit

First draft has created a dashboard with a collection of useful tools, readings and resources to get you started.

you can find the advanced toolkit at the bottom left of this dashboard.

- <u>https://start.me/p/vjv80b/first-draft-basic-toolkit</u>
- <u>https://firstdraftnews.org/training/</u>

#### **FIRST** DRAFT

ABOUT	PROJECTS	RESEARCI	H TRAINING	LATEST		<u></u> Q			
Training									
HOME	INFORM DISOF	ATION RDER	MONITORING + NEWSGATHERING	VERIFICATION	RESPONSIBLE REPORTING	ONLINE SAFETY			

#### Training and resources for journalists in an age of disinformation



#### Global Media and Information Literacy Week 2019



MIL Citizens: Informed, Engaged, Empowered

Worldwide, 24-31 October



- Together with <u>@UNESCO</u> Twitter developed a handbook to help educators empower youth with the digital skills they need to critically analyse news they engage with online!
- <u>https://about.twitter.com/content/dam/about-</u> <u>twitter/values/twitter-for-good/en/teaching-learning-</u> <u>with-twitter-unesco.pdf</u>

#### Teaching and Learning with Twitter





More: www.faktabaari.fi/edu, kari@kivinen.net





Helsingin ranskalais-suomalainen koulu Lycée franco-finlandais d'Helsinki

#### References

- EAVI, Beyond fake news infogram: <u>https://eavi.eu/wp-content/uploads/2017/07/beyond-fake-news\_COLOUR\_WEB.pdf</u>
- Faktabaari, Elections approach are you ready, <u>https://faktabaari.fi/assets/FactBar\_EDU\_Fact-checking\_for\_educators\_and\_future\_voters\_13112018.pdf</u>
- Finnish National Board of Education, 2016, National Core Curriculum for Basic Education 2014, Finnish National Board of Education Publications 2016:5, Helsinki
- Information literacy group: <u>https://infolit.org.uk/ILdefinitionCILIP2018.pdf</u>
- Invid, <u>https://www.invid-project.eu/tools-and-services/invid-verification-plugin/</u>
- Guidelines for journalists: <u>http://www.jsn.fi/journalistin\_ohjeet/</u>
- Kivinen, Democracy education, https://kivinen.wordpress.com/2019/04/22/encouraging-democratic-culture-and-human-rights-schools-in-action/
- Kivinen, How to build up resilience among school aged youngsters? FaktabaariEDU approach <u>https://kivinen.wordpress.com/2019/10/01/how-to-build-up-resilience-among-school-aged-youngsters-faktabaariedu-approach/</u>
- Lie Detectors, Journalists' findings from classroom https://lie-detectors.org/wp-content/uploads/2019/09/JournalistsFindings\_final.pdf
- Kysely suomalaisten nuorten ja nuorten aikuisten sosiaalisen median käytöstä. Ebrand Group Oy ja Oulun kaupungin sivistys- ja kulttuuripalvelut <a href="https://www.ebrand.fi/somejanuoret2019/">https://www.ebrand.fi/somejanuoret2019/</a>
- Twitter, Teaching and Learning with Twitter, <a href="https://about.twitter.com/content/dam/about-twitter/values/twitter-for-good/en/teaching-learning-with-twitter-unesco.pdf">https://about.twitter.com/content/dam/about-twitter/values/twitter-for-good/en/teaching-learning-with-twitter-unesco.pdf</a>
- Wineburg, Sam and McGrew, Sarah and Breakstone, Joel and Ortega, Teresa. (2016). Evaluating Information: The Cornerstone of Civic Online Reasoning. Stanford Digital Repository. <u>https://stacks.stanford.edu/file/druid:fv751yt5934/SHEG%20Evaluating%20Information%20Online.pdf</u>



- Information literacy incorporates a set of skills and abilities which everyone needs to undertake information-related tasks; for instance, how to discover, access, interpret, analyse, manage, create, communicate, store and share information.
- Information literacy is the ability to think critically and make balanced judgements about any information we find and use
- It empowers us as citizens to reach and express informed views and to engage fully with society
- Information literacy relates to information in all its forms: not just print, but also digital content, data, images and the spoken word.
- Information literacy is associated and overlaps with other literacies, including specifically digital literacy, academic literacy and media literacy
- Information literacy group: <u>https://infolit.org.uk/ILdefinitionCILIP2018.pdf</u>