



Developing critical thinking and
digital information literacy skills



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

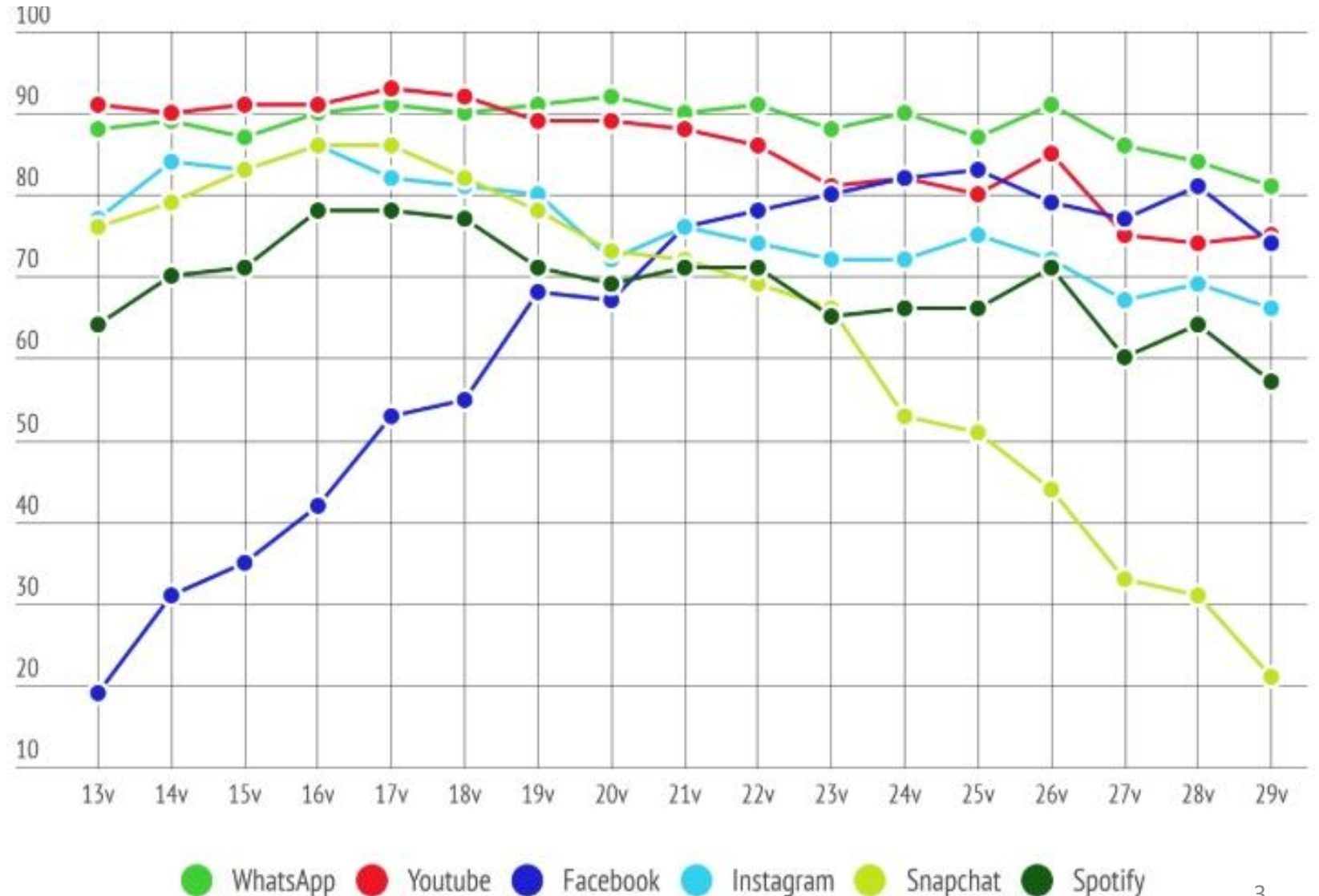
1. to support teachers in dealing with social media issues in the classroom context ;
2. to empower students with critical thinking and digital information literacy skills to resist mis- and disinformation
3. to activate students to verify their social media content

Explore the social media use and scene of your students

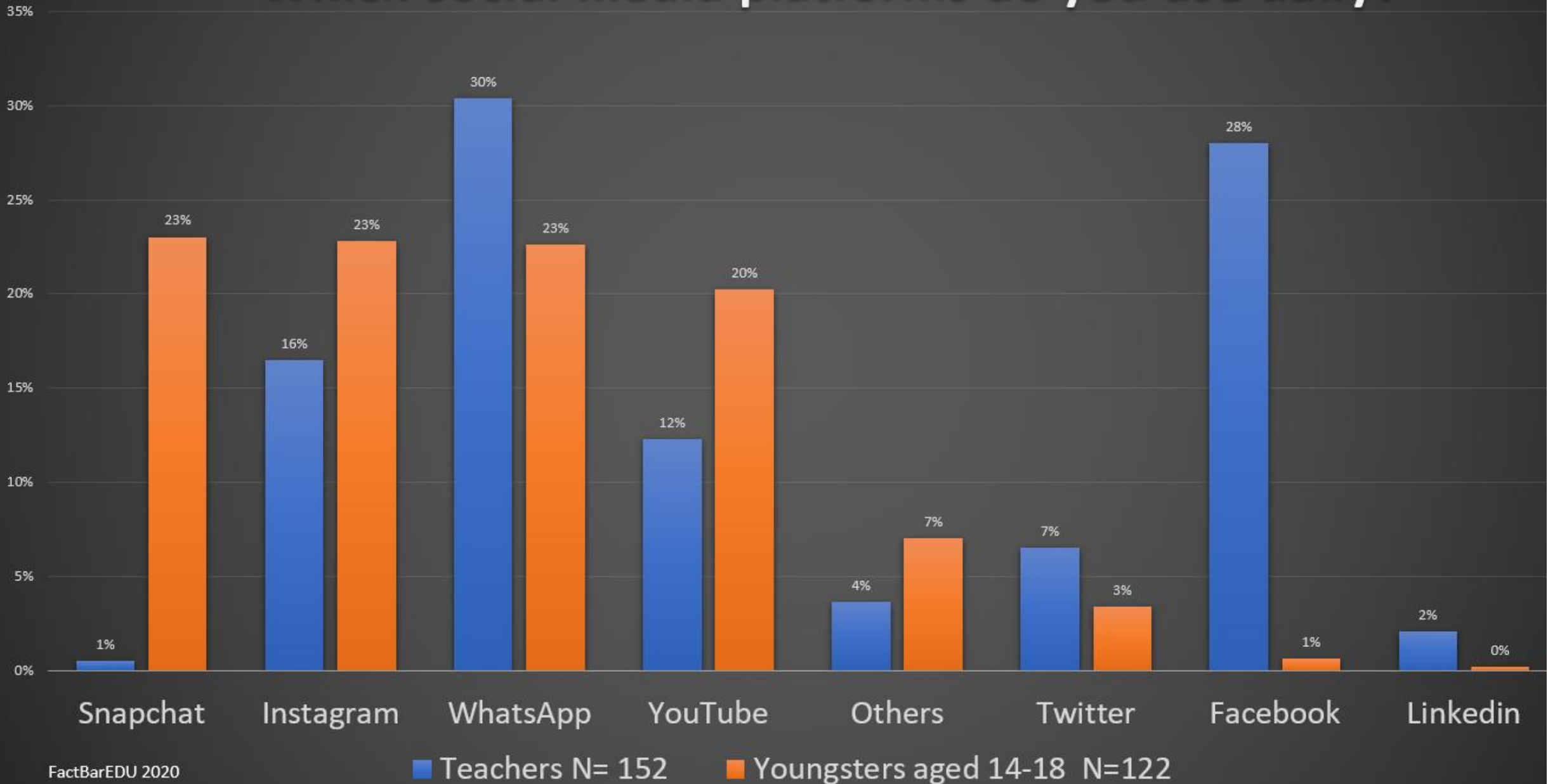
Finnish study on media use of Finnish youngsters aged 13-29
N=6247

- 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.**

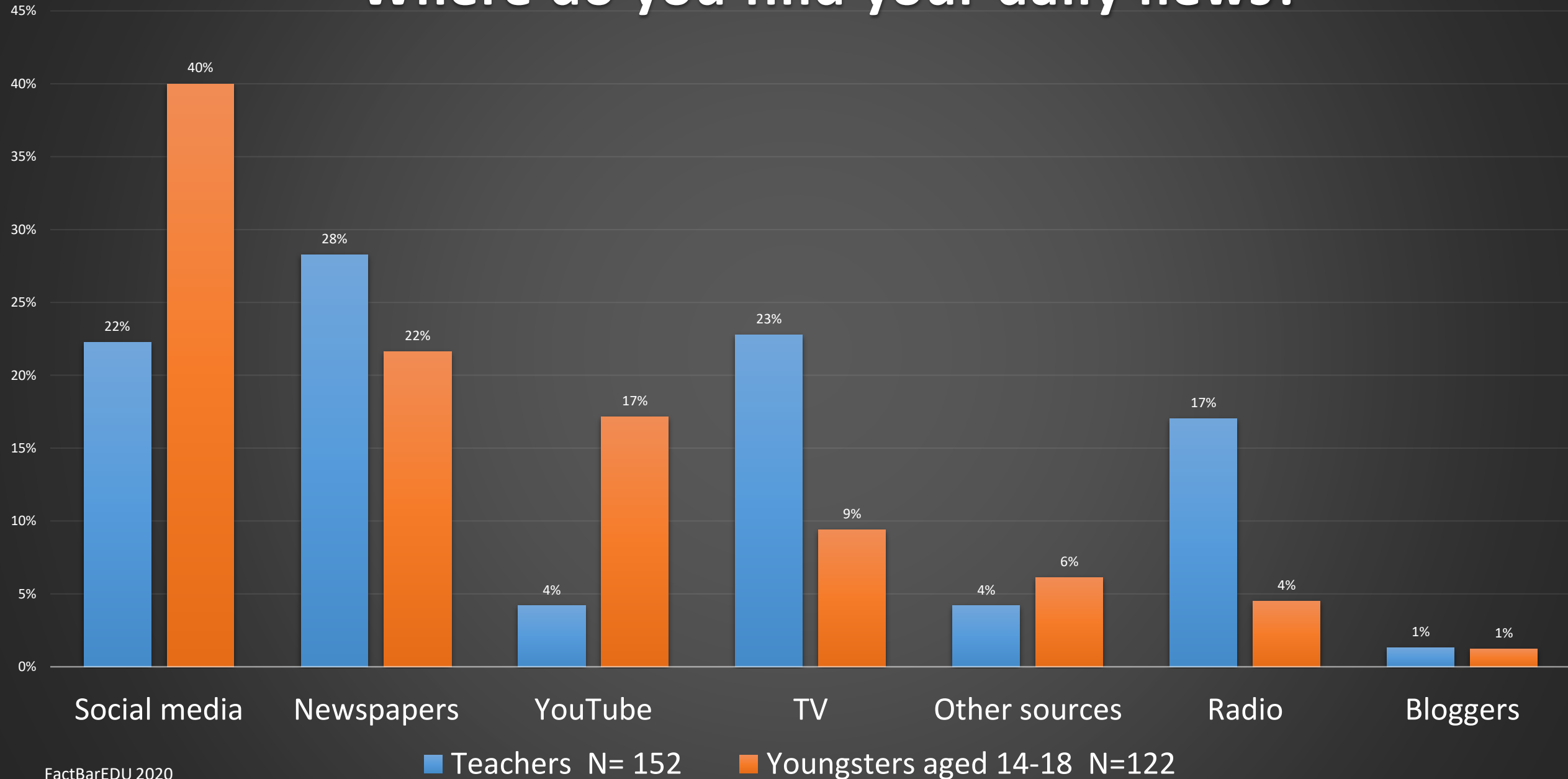
<https://www.ebrand.fi/somejanuoret2019/>



Which social media platforms do you use daily?



Where do you find your daily news?

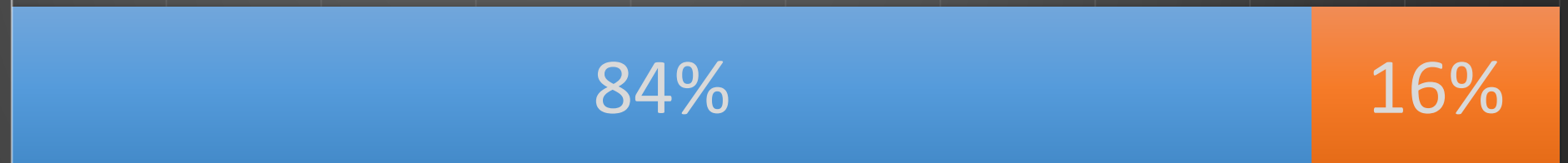


Have you ever read a suspicious piece of news?

Youngsters aged 13-18 N=123



Teachers N= 152



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

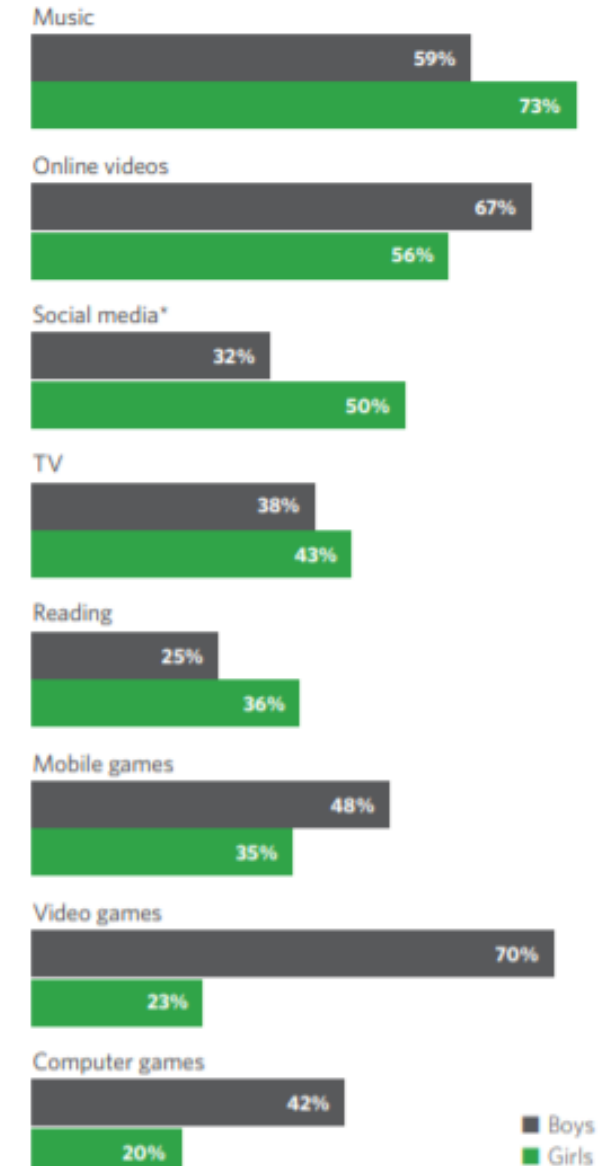


Media use by tweens and teens in US

- On average, 8- to 12-year-olds in this country use just under five hours' worth of entertainment screen media per day (4:44)
- Teens use an average of just under seven and a half hours' worth (7:22)—not including time spent using screens for school or homework.

Rideout & Robb (2019). The Common Sense census: Media use by tween and teens. Common Sense Media.
<https://www.commonsensemedia.org/sites/default/files/uploads/research/2019-census-8-to-18-key-findings-updated.pdf>
<https://www.commonsensemedia.org/sites/default/files/uploads/research/2019-census-8-to-18-key-findings-updated.pdf>

FIGURE H. Favorite media activities, 8- to 18-year-olds, by gender, 2019



*Among 13- to 18-year-olds

“Every citizen is a creator of information/knowledge and has a message.

They must be empowered to access new information/knowledge and to express themselves. MIL is for all – women and men equally – and a nexus of human rights.”

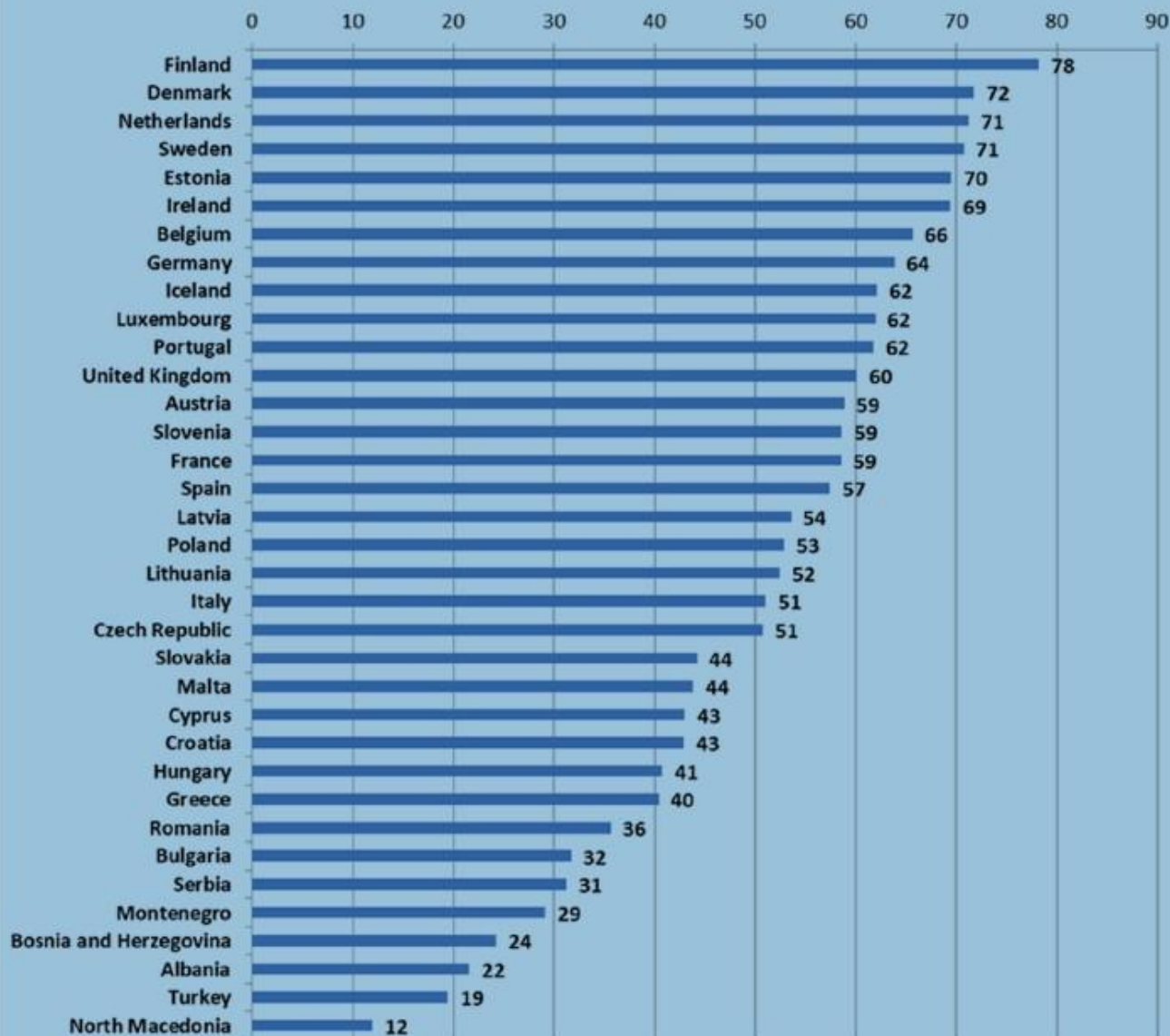
UNESCO 2nd MIL law

- “When the Internet is how we become informed citizens, traditional ways of reading are not merely ineffective (Gigerenzer & Gassmaier, 2011; Hertwig & Engel, 2016; Kozyreva et al., 2020). They’re dangerous (Caulfield, 2018; Warzel, 2021).”

Breakstone, Smith, Wineburg, Rapaport, Carle, Garland, and Saavedra (2021). Students’ Civic Online Reasoning: A National Portrait. Prepublication

Media Literacy Index 2019 ranking and scores

■ Media Literacy Score 2019



Lessenski, Marin. 2019. "Just think about it. Findings of the Media Literacy Index 2019".

Policy Brief 55. Open Society Institute, Sofia / European Policies Initiative (EuPI).

kavi.fi

https://kavi.fi/sites/default/files/documents/mil_in_finland.pdf

Finnish Media Education

Promoting Media and Information Literacy in Finland

In Finland, **media and information literacy (MIL)** is seen as civic competence; important to every citizen from an early age. The term **media education** (*mediakasvatus* in Finnish) refers to the educational actions promoting MIL and the skills related to it.

Take a look at how Finnish media education is promoted through **national policies** and in various **organizations** and **projects**. Get a taste of a few shining examples based on joint national efforts, and see a brief history of how Finland has developed into a forerunner in media education.

Multiliteracy & Finnish core curriculum

Multiliteracy is one of the cross-curricula education areas of Finnish curriculum.

- “Multiliteracy means abilities to obtain, combine, modify, produce, present and evaluate information in different modes, in different contexts and situations, and by using various tools.
- The pupils need multiliteracy in order to interpret the world around them and to perceive its cultural diversity.
- Multiliteracy supports the development of critical thinking and learning skills.”

(NCC 2016, p. 22)



Thinking and learning to learn

- ‘Thinking and learning to learn’ is another cross-curricula education area of Finnish curriculum.
- The learning and development of critical thinking and argumentation are of especial importance.
- “Encouragement is also needed for facing unclear and conflicting information.
- The pupils are guided to consider things from different viewpoints, to seek new information and to use it as a basis for reviewing the way they think.”

(NCC 2016)

For example, the pupils are asked to:

1. clarify unclear information and paraphrase arguments
2. recognise and evaluate arguments they come across in communication
3. compare mutually opposed claims about reality and defer to their own judgment when evaluating contradictions (e.g. by referring to facts)
4. practise metacognition; that is, the contemplation of their own way of thinking and the conscious reflection of opinion-forming

Promote critical thinking skills

- Schools should provide students with media and information literacy skills so that they would be able to make their decisions based on facts - not on disinformation or mal-information.
- The best way for the pupil to learn all-round critical thinking, regardless of the context, is to apply homogeneous and simple methods of critical thinking in different subjects, themes and events.

- Being critical does not mean being flat-out negative about a certain topic.
- The proper definition of 'critical thinking' denotes carefully balanced and analytical thinking.

Check-lists support development of critical thinking

- For critical thinking to transfer effectively from one context to another, the pupil should be able to understand it as a set of rules which can be used universally.
- Simple and clear check-lists and memory rules support development of the critical thinking skills and processes.
- **Think twice before liking & sharing!**

True or not-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?



From library instruction to digital information literacy



← → ↻ 🏠 <https://www.google.com/search?client=firefox-b-d&q=camel>

Google camel

🔍 Todo 🖼️ Imágenes ▶️ Vídeos 🛒 Shopping 📰 Noticias ⋮ Más ⚙️ Configuración

Aproximadamente 280.000.000 resultados (0,67 segundos)

[https://es.wikipedia.org/wiki/Camel_\(banda\)](https://es.wikipedia.org/wiki/Camel_(banda)) ▼
Camel (banda) - Wikipedia, la enciclopedia libre
Camel es un grupo de rock británico, formado en Londres en 1969 y consolidado en 1971. Es uno de los pioneros del rock progresivo, y uno de los pilares ...
Periodo de actividad: 1971 - actualmente **Discográfica(s):** Janus; Gama; MCA Recor...
Género(s): Rock sinfónico; Rock progresivo;... **Origen:** Guildford, Surrey, Inglaterra, Reino ...
[Mirage \(álbum de Camel\)](#) · [Andrew Latimer](#) · [Álbum](#)

[https://es.wikipedia.org/wiki/Camel_\(tabaco\)](https://es.wikipedia.org/wiki/Camel_(tabaco)) ▼
Camel (tabaco) - Wikipedia, la enciclopedia libre
Camel o Camel tobacco es una marca de cigarrillos fundada en 1913 por R.J. y P.E.L.G Reynolds Tobacco y perteneciente al grupo Japan Tobacco (JT) que es ...
[Historia](#) · [Marketing](#) · [Camel Cash](#) · [Joe Camel](#)

<https://es.camelcamelcamel.com> ▼
Seguidor de precio Amazon, gráficas de historial de precio de ...
camelcamelcamel: Seguidor de precio Amazon, gráficas de historial de precio de Amazon, seguimientos de precio y avisos de bajada de precios.
[Mayores bajadas de precio](#) · [Iniciar sesión en tu cuenta](#) · [El Camelizer](#) · [Funciones](#)

Otras personas también buscan

| | |
|------------------------------|----------------------------------|
| camel tabaco | camel tabaco web |
| camel color | camel precio |
| camelcamel | camel álbumes |

Digital information literacy

Digital information literacy can be defined as a set of skills and abilities which everyone needs to undertake information-related tasks; how to discover, access, interpret, analyse, manage, create, communicate, store and share information in the digital environment.

- is the ability to think critically and make balanced judgements about any information we find and use - whether or not materials under analysis are valid, accurate, acceptable, reliable, appropriate, useful and/or persuasive.
- empowers us as citizens to reach and express informed views and to engage fully with society

See e.g. Information literacy group:

<https://infolit.org.uk/ILdefinitionCILIP2018.pdf>

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.](#)



Teacher training needed

Teachers should be trained, and they should have tools and methods to deal with digital information disorder.

- According to our experience, teachers need in-service training to deal with the increase in the quantity of information and diversification of the variety of sources.
- Besides, the media landscape is re-shaping constantly and it has become more and more difficult to distinguish information from disinformation.



Digital information literacy toolkit elements

1. Explore the social media scene of your students
2. Learn and teach lateral reading skills
3. Promote critical thinking skills and lateral reading
4. Interact with experts – invite them in your classroom
5. What is the truth? Science > opinion
6. How to classify misleading information - Mis-, dis- and mal-information
7. Useful checklists
8. How to deal with confusing contents?
9. Algorithm awareness – search engines and social bubbles
10. Verify the authenticity of the photos and videos
11. Take care of your privacy and your digital footprint – what do you want others to know about yourself?

Learn & teach lateral reading skills

Professional fact-checkers read “laterally” across many connected sites instead of digging deep into the text at hand.

Lateral reading means that the reader verifies information (reliability of the source, facts, stats, sources) from different sites and sources while reading the text.

Lateral reading allows to answer to crucial questions:

- Who's behind the information?
- What's the evidence?
- What do other sources say?

Strategic ignoring strategy

- “Part of reading on the internet is developing the skills to ignore great amounts of information.”
- It’s an important shift in thinking: The power of attention is also its inverse – the power to ignore – and encouraging students to embrace strategic ignoring can empower them to avoid disinformation and focus on content that is worth their attention.

Martin Andrews (2021) Making the Case For Elementary Social Studies: Social Studies in the Age of Disinformation.
<https://www.inquired.org/> / Interviewing Sam Wineburg

The authenticity of the image

What to check on a story?

Source of the image:
<https://www.visualcapitalist.com/how-to-spot-fake-news/>

The Source

What's the story's intent? Investigate the site, its mission and its contact info.

The Author

Do a quick search on the author. Are they credible? Are they real?

The Information

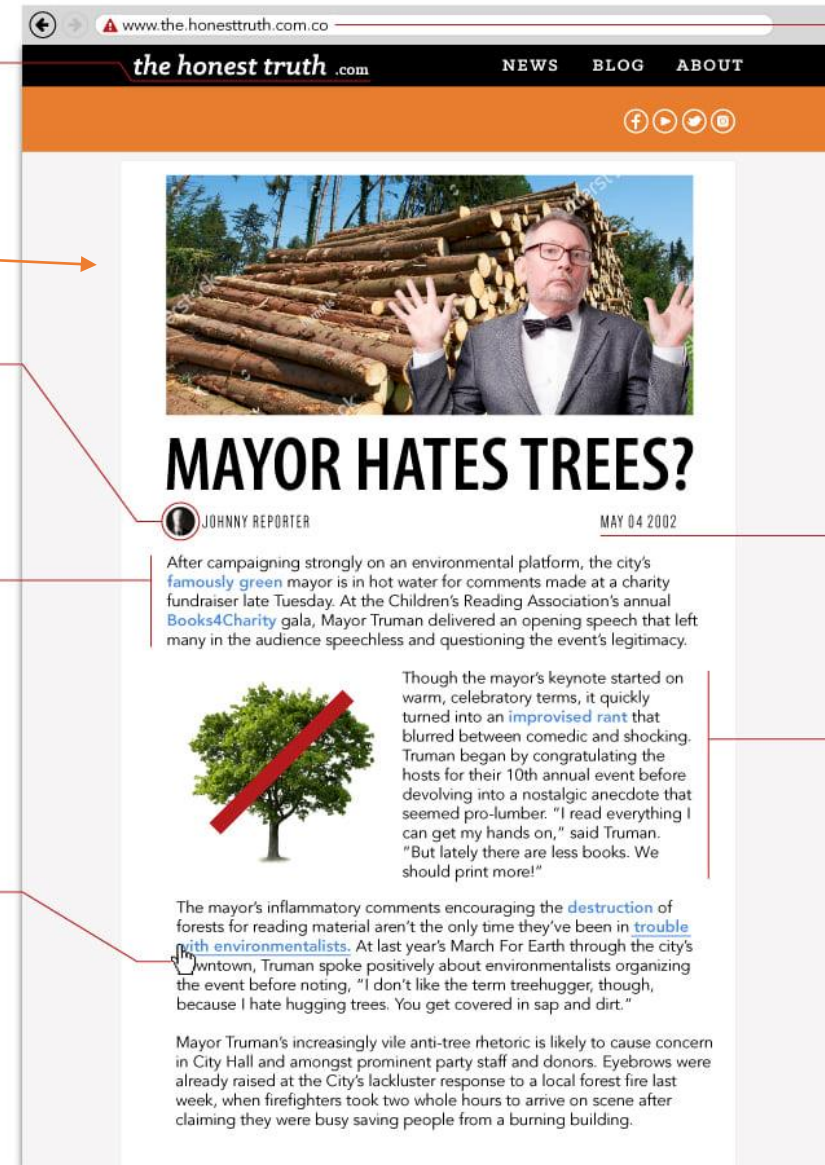
Read past click-bait headlines, note who is (or isn't) quoted, and verify the information on other sites.

Supporting Sources

Click on the supporting links, and perform reverse searches on images. Are they credible, and do they support the story?

SOURCE International Federation of Library Associations and Institutions, Harvard

Is It Fake News? WHAT TO CHECK ON A STORY.



The URL

Be wary of unusual top-level domain names, like ".com.co" that are designed to appear legitimate.

Your Bias

Who is the intended audience for this story? Consider if your own beliefs could affect your judgement.

The Date

Reposting old news stories doesn't mean they're relevant to current events.

The Text

Does the article have spelling errors or dramatic punctuation? Reputable sources have high proofreading and grammatical standards.

The Experts

Would this story meet academic citation standards? Consult a fact-checking site.

The most important thing is to *consider the credibility*

Interact with experts

- The interaction between journalists, media experts and schools is warmly recommended.
 - The basic idea of the Faktabaari EDU project was to adapt the proved fact-checking methods used by professional fact-checkers into the education field.
 - We have organized plenty of workshops, webinars, school visits, etc. to scale up the best practice tools for a larger public.





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.

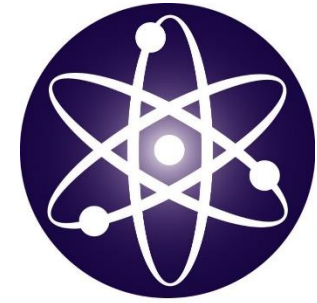
“



Facing the coronavirus, we must
cultivate the best of ourselves
and rely on **science & education**,
verify any **information** and share
knowledge.

Audrey Azoulay
UNESCO Director-General

Truth? Science > opinion



Science

- 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-of-science/>

Why scientific knowledge is more wonderful than opinion.



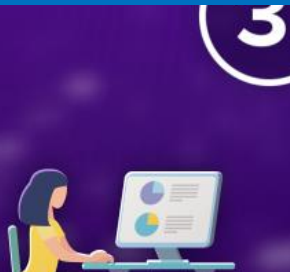
Scientific information is not an opinion. It has been evaluated impartially and accurately.



Scientific knowledge does not arise from scratch. It builds on previous knowledge.



Evidence based information can be freely criticized - constructive discussion is part of the matter.



Scientific knowledge is not the ultimate truth — it changes as understanding increases.

Scientific knowledge offers surprises - it challenges our current views.



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 well-being

**RECENT STUDY
SHOWS GINGER IS
10,000 X
STRONGER THAN
CHEMO**



**10 Health Benefits of
GINGER**

- ✓ Controls Diabetes
- ✓ Promotes Healthy Heart
- ✓ Treats Morning Sickness
- ✓ Reduces Arthritis Pain
- ✓ Reduces Menstrual Pain
- ✓ Prevents Various Types of Cancer
- ✓ Settles Upset Stomach
- ✓ Treats Migraine
- ✓ Prevents Cold and Flu
- ✓ Suppresses Cough





COUNTER
THE COVID-19
"INFODEMIC"

Beware of

false experts

False experts are often used
to manipulate information

Their role is to add credibility
to a message.

Debunk them! How?
Go online, check who that expert is.
Is he/she really an expert in this area?
Who does he/she represent?



milclicks
MEDIA AND INFORMATION LITERACY



Infodemic

- With the COVID-19 pandemic, a huge amount of right and wrong information has spread to the world.
- This flood of information is called **infodemic**.
- Due to the excessive amount of information, it is difficult for people to find reliable information when needed.
- Fact-checkers have been fighting against mis- and disinformation all around the globe. [The CoronaVirusFacts / DatosCoronaVirus Alliance database](https://www.poynter.org/ifcn-covid-19-misinformation/) already contains more than 10.000 coronavirus fact scans.

The screenshot shows a web browser window with the URL <https://www.poynter.org/ifcn-covid-19-misinformation/>. The page has a navigation bar with links: NEWS, TRAINING, ETHICS & LEADERSHIP, FACT-CHECKING, MEDIA LITERACY, and EVENTS. The main heading is "The CoronaVirusFacts/DatosCoronaVirus Alliance Database". Below the heading, a paragraph explains the database's purpose: "Here is the database that gathers all of the falsehoods that have been detected by the [CoronaVirusFacts/DatosCoronaVirus alliance](#). This database unites fact-checkers in more than 70 countries and includes articles published in at least 40 languages. Para búsquedas en **español**, haz [clic aquí](#). Faça buscas em **português** [aqui](#)." Below the text is a search interface with a large white search bar and a green "SEARCH" button. At the bottom, there are three dropdown menus: "Ireland", "Select a rating", and "Select an organization". To the right of these is a green "VIEW" button and a small "X" button. At the very bottom right, there is a "SORT BY: Oldest" dropdown menu.

Council of Europe: Learning activities based on the COVID-19 pandemic

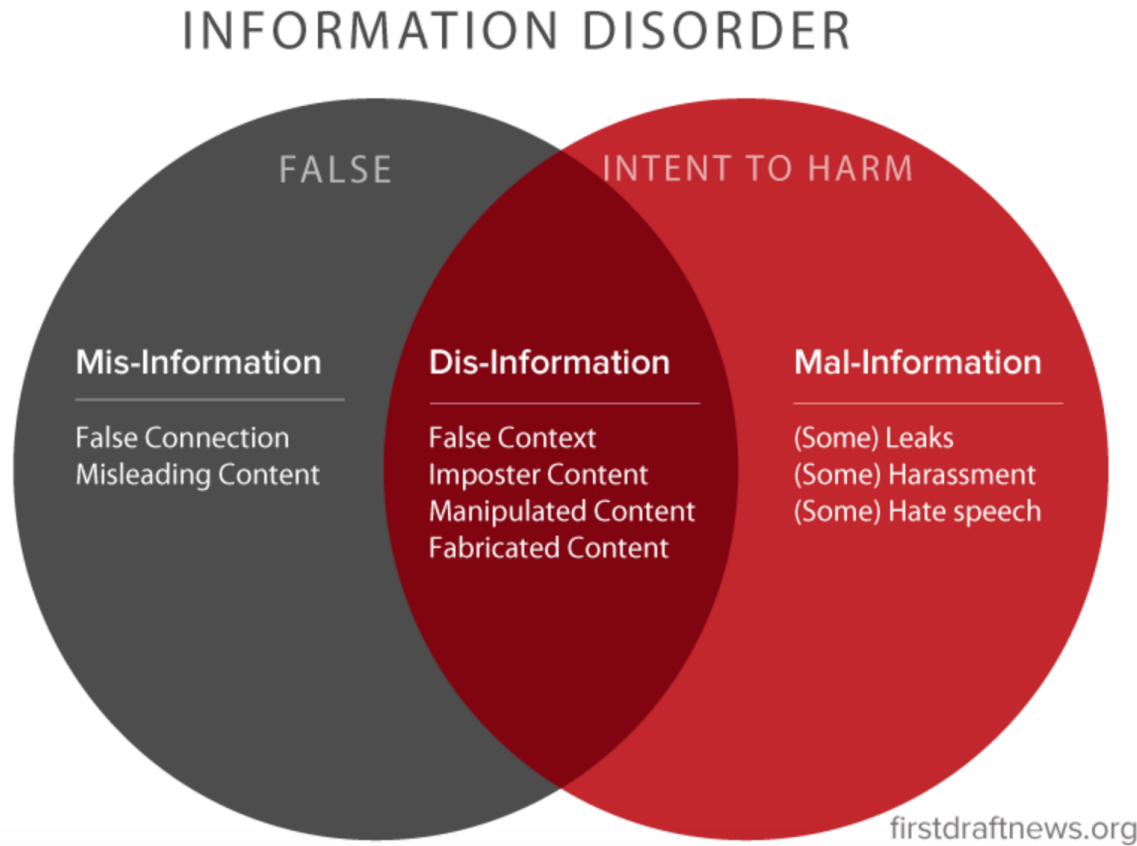
The Council of Europe has developed a set of learning activities that may be used in primary and secondary education, all of which are based directly on the challenges raised by the COVID-19 pandemic.

Each activity has been designed to foster a set of specific competences, and all of the activities relate to one or more of the six themes of the [Democratic Schools Network](https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/rfcdc-learning-activities-based-on-the-covid-19-pandemic).



<https://www.coe.int/en/web/reference-framework-of-competences-for-democratic-culture/rfcdc-learning-activities-based-on-the-covid-19-pandemic>

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.

Fact checking and critical thinking

- Fact-checking denotes a process of research which strives to gain a thorough understanding of the truthfulness or likelihood of, for instance, a claim made in public
- Fact-checking is conducted to ensure that, for instance, decisions are not made based on unfounded claims and that citizens could access trustworthy and accurate information. Factchecking is also a potent weapon against unethical information operations
- In the fact-checking process, critical thinking has been simplified into an easy-to-understand rule which can be applied in the same way regardless of the context.
- Fact-checking encourages pupils to be careful, check statements and spread only verified knowledge.
- The idea is to support and increase responsible participation on digital channels.

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.

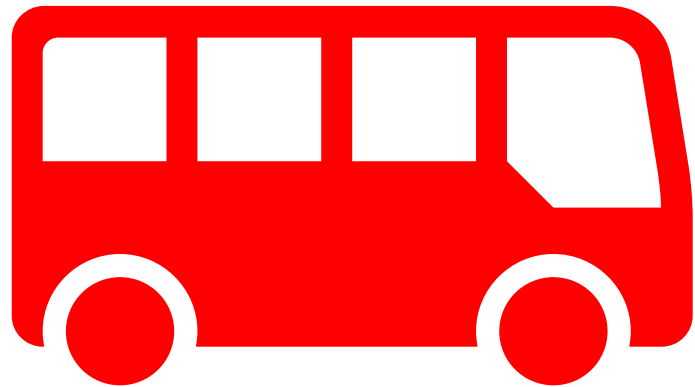
Greta has done her science homework

- 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 science-based 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-her-science-homework/>



Claim: There a greater change of dying by being hit by a bus than by COVID-19? (UK-2020)



Is there a greater chance of dying by being hit by a bus than by COVID-19?

Posted on 12 November 2020 by FactCheckNI



Fact Check!



Is there a greater chance of dying by being hit by a bus than by COVID-19?

No.

Someone in Great Britain has a 3,000 times greater chance of dying from COVID-19.

Think. Check. Share.

WWW.FACTCHECKNI.ORG

CLAIM: There is a greater chance of dying in a bus collision than by COVID-19.

CONCLUSION: INACCURATE. The probability of a randomly selected resident of Great Britain dying from January to October 2020, with COVID-19 mentioned on the death certificate, was over 3,000 times higher than the average probability of dying as a pedestrian in an accident involving a bus or a coach in the same period. [CONTINUE READING](#)

Posted in [Articles](#), [COVID-19](#), [Fact checks](#), [Health](#) Tagged [bus](#), [coronavirus](#), [death](#), [fact check](#), [health](#)

FactCheckNI



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?



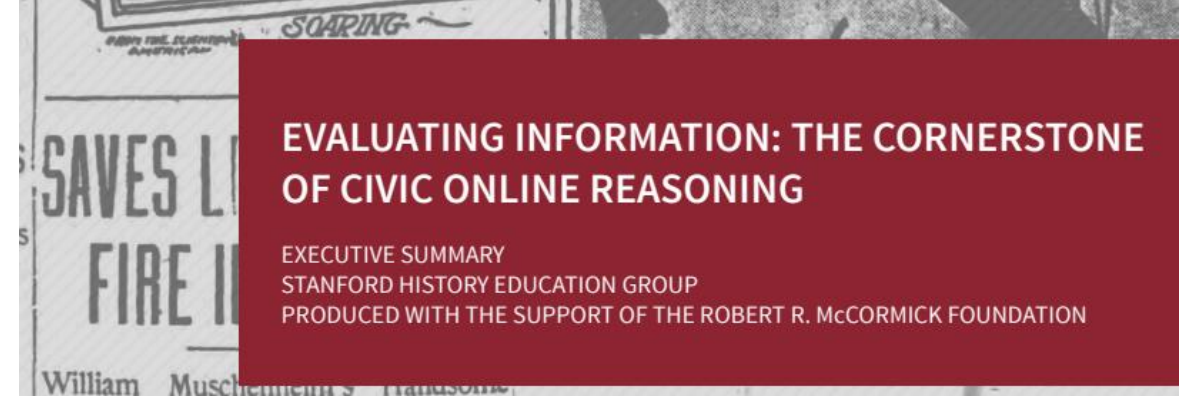
Workshop idea 1

Fact-checking process in a school

1. 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
4. Present your findings (“True, “False” or “50/50”)
5. Publish and share the results, e.g. as a blog text or a presentation paper



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.
 - **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.pdf>

Workshop idea 2

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.



Confusing information

- **Conspiracy theory** tries often to explain complex issues in a simple way as response to uncertainty. It can be e.g. a belief that an event or situation is the result of a secret plan made by powerful people. Rejects experts and authority.
- **Pseudo science** is a phenomenon very similar to conspiracy theory, but different in that it claims to be science.
- **The misleading title** is that the title does not match the content. Just effective headlines can lead to effective propagation, or trend-setting, in social media. This is the so-called "**Clickbait** " when the goal is to get the user to click on a link that does not match the content.
- **Incorrect attribution:** Shows something that someone hasn't said in the name of someone or entity.
- **Content distortions** include fake or misplaced pictures, stats, videos, recordings, etc.
- **Sponsored content:** Advertising is made to look like editorial
- **An echo chamber** is about when like-minded people have drifted (online or offline) to talk only to each other.
- **Satire** can embarrass people who confuse the content as true.
- Etc.

propaganda



- adopted by governments, corporations and non-profits to manage attitudes, values and knowledge
- appeals to emotions
- can be beneficial or harmful



partisan



- ideological and includes interpretation of facts but may claim to be impartial
- privileges facts that conform to the narrative whilst forgoing others
- emotional and passionate language



clickbait



- eye catching, sensational headlines designed to distract
- often misleading and content may not reflect headline
- drives ad revenue



conspiracy theory



- tries to explain simply complex realities as response to fear or uncertainty
- not falsifiable and evidence that refutes the conspiracy is regarded as further proof of the conspiracy
- rejects experts and authority



sponsored content



- advertising made to look like editorial
- potential conflict of interest for genuine news organisations
- consumers might not identify content as advertising if it is not clearly labeled



pseudoscience



- purveyors of greenwashing, miracle cures, anti-vaccination and climate change denial
- misrepresents real scientific studies with exaggerated or false claims
- often contradicts experts



satire and hoax



- social commentary or humour
- varies widely in quality and intended meaning may not be apparent
- can embarrass people who confuse the content as true



misinformation



- includes a mix of factual, false or partly-false content
- intention can be to inform but author may not be aware the content is false
- false attributions, doctored content and misleading headlines



error



- established news organisations sometimes make mistakes
- mistakes can hurt the brand, offend or result in litigation
- reputable orgs publish apologies



bogus



- entirely fabricated content spread intentionally to disinform
- guerrilla marketing tactics; bots, comments and counterfeit branding
- motivated by ad revenue, political influence or both



IMPACT

neutral

low

medium

high

MOTIVATION

money

politics/power

humour/fun

passion

(mis)inform

Workshop idea 3

Different types of misleading information

- Choose one type of misleading information, explore it and share your findings with others!
- https://eavi.eu/wp-content/uploads/2017/07/beyond-fake-news_COLOUR_WEB.pdf



Algorithm awareness:

Algorithms shape what we see

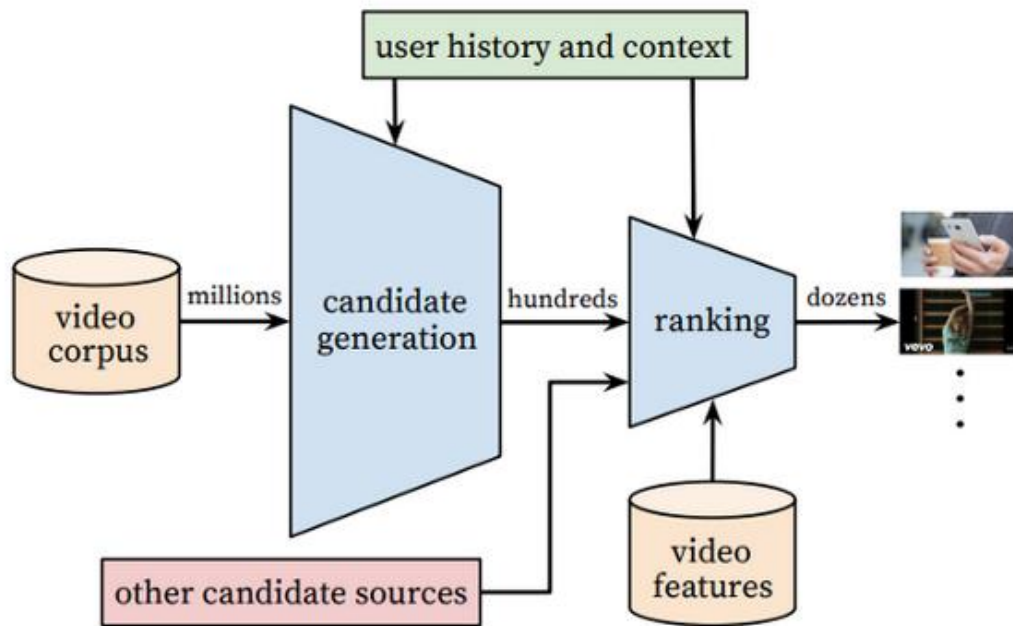
- An algorithm is a computer program that does things in a specific order. At their simplest, algorithms make everyday and mechanical work easier, for example, by sorting simple information.
- Social media platforms provide us with targeted information through algorithms
 - In practice, this means that 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.**

Data & algorithm literacy

- Data and algorithm literacy are needed for understanding the basic qualities and effects of data and algorithms that are constantly at work, influencing directly what you see, think and do online and beyond
- Data literacy lets you assess and observe your data trails and their usage in different systems.
- Algorithmic literacy gives you a basic idea and awareness on how different AI-powered systems personalize your experience, and how the power of algorithms is used to influence your interpretations, expectations and decision-making.
- These skills also make you more aware of your own (data) rights in digital platforms.

Koponen (2021) <https://thenextweb.com/news/ai-powered-information-operations-and-new-citizenship>

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.

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

Workshop idea 4

Algorithms & information bubbles

1. Choose any word
2. Make a search using your favorite search engine
3. 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.
<http://www.refseek.com/>
- Plos - peer-reviewed articles are free to access, reuse and redistribute <https://www.plos.org/>
- Google Scholar - academic articles - not all of them will give you access to the full text
<https://scholar.google.co.uk/>
- DOAJ (Directory of Open Access Journals) <https://doaj.org/>
- 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
<http://europepmc.org/>
- Public Library e-resources - Joint your local public library and find out what online resources they have for you to access



Check the 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 – <https://google.com>

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

- 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.

Workshop idea 5: 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



Supermodels apply these three simple tricks to look young. Click to know what they are.

thisimagedoesnotbelongtome.com

And in the next page the answer is...

- 1) *Get at least 8 hours of sleep*
- 2) *Exercise regularly*
- 3) *Maintain a positive attitude*

Privacy & Digital footprint

- 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



#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/>

RESOURCES

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.

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



- UNESCO: Media and information literacy curriculum for teachers in different languages
- <http://www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/media-and-information-literacy-curriculum-for-teachers/>
- UNESCO: Five Laws of Media and Information Literacy
- <http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/five-laws-of-mil/>

ACT Journal on Information Disorder is out soon!



TEACHING citizenship

Information Disorder: Teaching critical media literacy and citizenship in a digital age



<https://www.teachingcitizenship.org.uk/journals> Issue 51

In this edition:

Expert briefings on digital media and citizenship, teacher case studies of what works, practical ideas and resources for improving practice. Plus reviews and networking opportunities.

ACT

Issue No 51
Summer 2020

Journal of the Association for Citizenship Teaching
www.teachingcitizenship.org.uk



Global Media and Information Literacy Week 2019

MIL Citizens: Informed, Engaged, Empowered

Worldwide, 24-31 October



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

Teaching and Learning with Twitter





- **Welcome to the DigCompEdu Check-In**

Learn more about your personal strengths and the areas where you can enhance the ways in which you use digital technologies for teaching and learning. Answer the 22 questions of this self-assessment to receive detailed **feedback** with useful **tips** and the **key milestones** on your personal roadmap to innovating teaching.

This tool will help you to reflect on your digital competence as an **academic** teaching in **higher and further education**.

- If you work in **primary**, **secondary** or initial **vocational** education and training, we recommend that you use the following version of the tool:
<https://ec.europa.eu/eusurvey/runner/DigCompEdu-S-EN>
- If you work in **adult education** or provide continuous professional development, we recommend that you use the following version of the tool:
<https://ec.europa.eu/eusurvey/runner/DigCompEdu-A-EN>
- Please note that, by using this tool, you agree to [EUsurvey's rules on data protection](#).

Fact-checking for educators and future voters

- Faktabaari has co-created with teachers a simplified version of its fact-checking methodology for educators in 2019.
- It encourages critical thinking and participation for fact-based public debate and to resist disinformation.
- The method is compatible with IFCN code and "information disorder" vocabulary and ideally adaptable.
- It brings fact-checking and media literacy communities together for apparent synergies.
- The toolkit for educators include examples to inspire, create and share new lesson plans.
- https://faktabaari.fi/assets/FactBar_EDU_Fact-checking_for_educators_and_future_voters_13112018.pdf

FactBar[®]
EDU

Fact-checking
for educators
and future voters

**Elections
approach**
- are you ready?

When is there a reason to suspect disinformation?



- The message is repeated very often
- There are striking pictures in the message
- The message seeks to elicit a strong emotional response
- The message has strong story elements
- The sources of the message are strange or extraordinary (eg page metadata leads to a different country than the content of the message suggests)
- Search engines find the same or almost the same message, but with a much older date
- Images related to the message can be found on the web in other contexts with reverse image search
- The person spreading the message is spreading other suspicious content

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

Information disorder



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.

The foregoing categorisation is not exhaustive but it is a more analytical and to the purpose than the somewhat harmful 'fake news' tag. The widespread use of this tag usually sparks needless distrust even towards responsible, fact-based journalism.

How to check the authenticity of the images!

Pictures and videos are now easy to edit and modify

- Often, image editing is harmless and useful for improving image quality.
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- INVID, a French company, provides tools for verifying images and videos. Invid's tools work especially on YouTube, Facebook and Twitter. The InVID verification plugin downloadable to the browser is particularly effective.



FaktaBaari[®]EDU

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

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www.faktabaari.fi