JOIN US IN THE BATTLE AGAINST DISINFORMATION

MANUAL FOR SCHOOL TEACHERS ABOUT FAKE NEWS

JUIBAD

Join Us In the Battle Against Disinformation
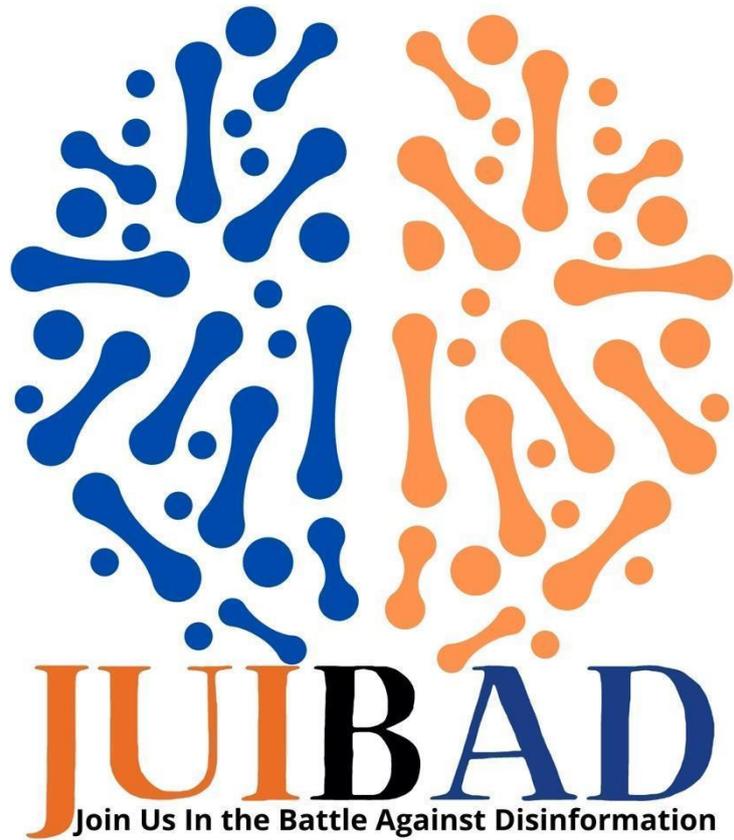
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Dear Educators,

Today, the lives of all of us are unimaginable without the internet and social networks. There, various content attacks us every day, in large flows. This poses challenges for the development of new skills - to evaluate the content provided to us and to separate news from liars, as well as from misinformation, so it is especially important to develop media literacy, critical thinking and analytical skills.

The role of the school in the age of disinformation is crucial. Media literacy is the totality of knowledge, skills and habits, which include the ability to understand the media and technology, to find, analyze and evaluate the information disseminated in various media channels.

Media literacy training is perceived by the developers of this method as a key way to critically evaluate and analyze the content that reaches us, so in this tool you will find tips on learning and teaching about liars, examples of tasks to identify the source and fake news, to evaluate the manipulation of disseminated information, and tasks and exercises that promote the recognition of propaganda, misinformation, and false news.

We, as educators, need to help students learn to use media properly and critically evaluate their content by seeking, selecting, and disseminating information and ideas for personal or social purposes.

To achieve these goals, 7 different organizations PGI D-r IVAN BOGOV, 5o GYMNASIO VOLOU, ASSOCIATION DE COOPERATION AL DESAROLLO ABARKA, INTARATIONAL INSTITUTE OF APPLIED PSYCHOLOGY AND HUMAN SCIENCIES ASSOCIAZIONE CULTURALE, VILNIUS VOCATIONAL TRAINING CENTRE OF TECHNOLOGIES, NAMOI, KAPADOKYA EGITIM VE ARASTIMA DERNEGI, SC PSIHOFORWORLD have joined forces and initiated the project JUIBAD - Join us in the battle against disinformation.

The project has the goal to promote fact-checking and critical thinking among school students in order to combat fake news and online disinformation, in line with the European Communication tackling online disinformation: a European Approach to Fake news can lead to several negative consequences related to racism, intolerance, xenophobia, discrimination, as well as produce false beliefs about topics related to health. Moreover, fake news can increase hate speech and other negative outcomes.

The project is based on the production of 3 intellectual outputs, translated into 9 languages with the following characteristics and impact expected. One

of the 3 intellectual products developed by the organization during the project is in front of your eyes.

An online "Manual for School Teachers against Fake News" is an e-book targeted on school teachers including methodologies for favoring critical and lateral thinking among students through problem-solving exercises focused on Fake News debunking; a psychological test dedicated to identify students at risk for being subject to negative effects of fake news; a gamification methodology for debunking, lateral thinking, critical thinking detection of fake news led by school teachers and practical examples; and exercises for teachers designed to explain the effect of fake news in the several fields of teaching for the dedicated integration into classic school programmes.

In this methodological tool you will find the following issues:

•   Fake news and disinformation in different school subjects "Vaccine against inphodemic" theory and practice.

•   Increasing educators and teachers knowledge in educating students handling propaganda, misinformation, and fake news.

•   Helping them integrate these issues into the curriculum of different subjects.

•   Leading on school-policy development and action planning in this area.

•   How to spot fake news - 10 tips for teaching and learning about fake news.

•   Danger of disinformation and fake news as well as increasing critical thinking.

•   Non-formal learning tools, competition activities, games, social theatre as a tool for fighting fake news, online tools.

•   Gamification and other exercises for students (real games).

We hope that this publication, created by us, will be useful for you in planning and developing your students' media literacy, analytical skills and critical thinking in recognizing propaganda, misinformation and liars.

The team of the project "JUIBAD – Join us in the battle against Disinformation".

INCREASING EDUCATORS' AND TEACHERS' KNOWLEDGE IN EDUCATING STUDENTS HANDLING PROPAGANDA, MISINFORMATION AND FAKE NEWS

INTERNATIONAL INSTITUTE OF APPLIED PSYCGOLOGY

AND HUMAN SCIENCES ASSOCIAZIONE CULTURALE

What is the true meaning of the expression fake news?

A recent study, published by researchers Hunt Allcott (New York University) and Matthew Gentzkow (Stanford University) published in the Journal of Economic Perspectives, states that it is all information disseminated by the mass media that masquerades as journalistic article and disseminates information blatantly incorrect to deceive the public.

Fake news is therefore not just any gossip spread on social networks, but they are a more specific phenomenon: they are sites, or video channels, which intend to deceive their readers by deliberately publishing incorrect information as if it were true.

This more precise definition excludes, for example, satirical sites, which parody journalism to explicitly make jokes, such as the satirical web site "Lercio" in Italy: they are not fake news because they are not intended to deceive, it is quite clear that it's all about jokes, exaggeration and fiction.

This definition also excludes journalism sites that do serious work but may have made mistakes, as with any news organization. The fact that the New York Times may have published incorrect news does not make this site a vehicle for fake news, because incorrect information can be corrected and the vehicle is not intended to misinform. Now, the more mistakes a news medium makes, the more its credibility is compromised. At some point, the public may no longer trust their information and not differentiate reliable results from questionable ones.

Why do fake news appear with great intensity on social networks and why do they spread so easily and in such quantity?

The fake news spread because it was created precisely for this: to attract the public and go viral. There are websites created specifically to disseminate incorrect information, but which sound plausible to their target audience, deceiving them to the point of attracting visitors and potentially turning some of their audience into new propagators of their content.

These sites grab the attention of a large audience, who get caught by their bombastic headlines without realizing they aren't true. The goal is to create traffic and attract visitors in any way as money is received every time the advertisements within the pages of the site are displayed.

Secondly, some of these sites have ideological goals and post false information to promote or criticize public figures such as political candidates or famous people. Some of these sites are created simply for fun, to create confusion or "troll", that is, to compromise debate.

There are also cases of false news that are created as a form of revenge for personal disagreements, to spread rumors and unfounded accusations, up to more delicate and complex phenomena such as "revenge porn".

Would the big motivation for spreading fake news be financial?

No doubt. A report by the BuzzFeed site with authors from Macedonia (a country that has become the production center of fake news sites) indicates that some sites can fetch anywhere from $ 3,000 a month to $ 5,000 a day, when fake news becomes viral. But the business is probably much larger.

Why does society (or part of it) tend to rely on news spread on social networks as the only source of information?

All human societies have always used their social networks as mechanisms for exchanging information. Even before the media centralized and turned information into a business, people exchanged information between neighbors, colleagues, family members and members of clans and tribes.

Social networks such as Facebook, Twitter, Whatsapp and others are just "re-centralizing" this traditional mechanism. The difference is that, as these platforms acquire great importance and focus the attention and time of billions of people, they become a mechanism that can integrate other forms of communication in an increasingly influential way. In some social segments, social networks have already abundantly replaced traditional media or live exchanges between people with similar interests.

An important issue is the credibility of whoever presents the information to us: social networks allow celebrities from influential segments to mobilize their followers on topics they consider important.

Likewise, individuals from social circles we trust (friends, family or colleagues) lend their credibility by relaying information to their networks through social media.

However, it is worth remembering that even these people's reputations can be compromised if errors and inaccuracies are systematically revealed - many may stop trusting those who disclose incorrect information.

How is it possible to distinguish fake news from real news?

Fake news has always been spread by various media, but now, by social media and publishing platforms, it is easier to create a website to spread lies.

Likewise, it is difficult for the public to differentiate one trustworthy website from another suspicious one.

These critical public education initiatives in relation to the media must be widespread.

On December 15, 2016, Mark Zuckerberg, founder and CEO of Facebook, exposed the project to stem the spread of false news: links shared on Facebook can now be reported by users as possibly fake, through the "report post" option on Facebook. Repeated reports will be analyzed with the support of third parties. If the news is found to be false, it will lose visibility and cannot be sponsored. In this way, the ethical problem of censorship will be circumvented and users will be notified of the measures taken.

In Italy, the Speaker of the Chamber Laura Boldrini has also launched an appeal to those who wish to act against false news and disinformation.

In an interview with the Financial Times, published on 30 December 2016, the antitrust president Giovanni Pitruzzella invited the countries of the European Union to equip themselves with a network of public agencies to combat the spread of fake news artfully scattered on the web. Pitruzzella explained that this commitment should concern the states and not be delegated to social media, such as Facebook. In other words, he suggested the creation of a new network, made up of independent agencies coordinated by Brussels and modeled on antitrust agencies. This network would have the purpose of identifying fake news, imposing their cancellation and even sanctioning those who created them and organized their dissemination via the Internet. It would therefore be a matter of a third entity capable of providing when the public interest is threatened. "Post-truth - declares Pitruzzella - is one of the engines of populism, it is a threat that weighs on our democracies. We are at a crossroads: we have to choose whether we want to leave the Internet as it is, a Far West, or whether to impose rules, in which we take into account that communication has changed. I believe that we must set these rules and that it is up to the public sector to do it"[1].

What is the fake news that spread more easily or has more "reliability"?

In general, like any gossip, news tends to stand out that appeals to controversial topics, which mobilize the public to the point of interacting and sharing. The study by Allcott and Gentzkow[2] highlights the predominance of

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[1] https://st.ilsole24ore.com/art/notizie/2016-12-30/pitruzzella-antitrust-propone-network-europeo-anti-bufale-grillo-attacca-nuova-inquisizione--174117.shtml?uuid=ADBcUFNC

[2] https://www.aeaweb.org/articles?id=10.1257/jep.31.2.211

fake news dealing with political issues, in particular allegations of alleged scandals involving candidates in the US presidential elections, but this could be due to the period analyzed, deliberately close to that country's elections.

The sites that simulate a journalistic appearance, also mimicking the names of established media, also seem to "borrow" the credibility of the vehicles that parasitize: this was the case of the "Denver Guardian", a site already obscured after the criticisms received for publishing fake news, and which used the name of the Londoner "The Guardian", one of the most credible international newspapers in the world.

POSSIBLE TYPES OF MISTAKING INFORMATION

1 - False news.

These are texts that seem like real news. They have a similar layout to that of a traditional news site, cite data, and sometimes carry alleged statements from interviewed experts. The information presented can be completely false, mixed with real elements - such as a politician's statements based on nonexistent data, for example - or deliberately distorted.

Examples:

- Donald Trump claimed in November 2020 that the US elections were rigged by false postal votes.

- 5G waves are responsible for the Covid-19 pandemic

Fake news mainly works with extreme opinions to influence people who are dissatisfied with certain situations.

For example, for years, the posts of far-right groups[3] around the world have been fomenting hatred and racism against foreigners and migrants through populist approaches, which propose solutions that are only apparently easy to implement.

Their content is formulated in a sensationalist or emotionally fascinating way to enchant readers. Often references and connections are made to the living environment of the average reader, population group, etc. so that people feel emotionally directly involved.

This is not a casual and occasional activity: there are real logistics centers where teams specialized in this type of viral content operate.

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[3] Information on the topic - Right-wing extremism: The Hass-im-Netz platform provides information on political extremism on the Internet

These teams can be composed of former journalists, advertisers, marketing professionals, technology professionals, who analyze in real-time the most popular trends of social discussions and create posts and content perfectly in line with what is the emotional trend at that exact moment.

A strategy that has already been revealed is also to create hundreds of fake profiles (complete with photos, personal data and daily posts) on social media, which start interacting with other people and spreading news and videos from fake websites and encouraging contacts them to do the same. This creates an immense network of sources that are only apparently different but which channel their results all in one direction.

This emotional appeal is intended to influence people to shift opinions and gather political consensus, strengthen the positive perception of some political leaders and their programs, which are so vague that they change according to how public opinion changes.

Far-right content often targets children and young people from medium-sized or socially weaker families. They deal with issues affecting these target groups, offering easy solutions.

Furthermore, right-wing extremist groups rely on common prejudices against people from other countries, for example, and specifically feed fears such as social decline or foreign infiltration. Many people feel that their opinions and fears are understood and hope for a complete solution to their problems. The strong emotional appeal and the presumed understanding of the emotional state of individuals are modalities that are, unfortunately, proving to be very effective in conditioning the masses.

2 - WhatsApp chains.

These are alarmist and disinformation messages circulating in application groups. These messages are all asking to be shared. This request can be direct, such as those announcing that applications such as WhatsApp or Facebook will become paid and that, to avoid the user having to make the payment, it is necessary to share it with 20 friends.

Others are indirect, for example reporting non-existent kidnappings in some regions and asking to inform the local police.

Some chains promising to recharge the phone's battery by sharing the message with 4 other friends, chains that promise non-existent discount coupons for Ikea and Amazon if the message is shared, up to the most delusional messages that warn you to delete all your photos otherwise ISIS will

trace our phone number for terrible purposes or to put the phone in the microwave to recharge it!

Warning: these are not always simple pranks. In 2017, for example, a fake WhatsApp chain referring to a group kidnapping children in India led to the murder by terrified ordinary citizens of seven possible suspects. The story circulating in the app, however, was completely false. No child abductions were reported in the area described by the message.

3 - Satire.

Some sites are inspired by real news, events or characters to produce satirical content on reported facts. They are a kind of parody of journalistic content and, to an inattentive eye, can be interpreted as real information. This is the case, for example, of the Italian online magazine "Lercio", which has more than 1.5 million likes on its Facebook page. While some titles may immediately seem false or doubtful, others may pass for true, such as the famous, but non-existent, "Comune di Bugliano" and all its posts, so plausible that still today many people believe it true.

4 - The clickbait.

Sensational titles, captivating images, which attract the attention of readers, gossip about famous people... Often the contents of this type of site, full of advertising inserts, do not correspond to what we were looking for.

It is a format designed to attract clicks and shares to generate traffic on the site and "pay per view" income on advertising on the pages. Even not a few more prestigious sites, such as online newspapers, unfortunately adopt this system to generate economic income.

5 - Mis-information.

Unintentional sharing of false, incorrect or obsolete information by mistake, due to lack of vigilance, rigor, knowledge on the subject.

Some highlight the overlap between deliberately false information and inaccuracies published for superficiality:

TYPES OF INFORMATION DISORDER

FALSENESS   INTENT TO HARM

Misinformation
Unintentional mistakes such as innaccurate photo captions, dates, statistics, translations, or when satire is taken seriously.

Disinformation
Fabricated or deliberately manipulated audio/visual content. Intentionally created conspiracy theories or rumours.

Malinformation
Deliberate publication of private information for personal or corporate rather than public interest, such as revenge porn. Deliberate change of context, date or time of genuine content.

Source:https://www.ntcenter.bg/en/classification-of-misinformation-and-disinformation/

6 - Manipulation for decontextualization.

This is largely distorted information, constructed from segments of real information but disseminated in another context. It could be a rewritten information, a truncated image, an old video subtitled with false information. If the initial creator is aware of its manipulation, internet users can then pass on the information in good faith believing it to be authentic.

- Example: broadcasting a photo of the crowd at Barack Obama's inauguration in 2009 claiming that they are the audience at Donald Trump's inauguration in 2017.

7 - Conspiracy theories.

It refers to the theses that claim that a group of powerful, secret and occult people manipulate the whole world, countries or events, scattered by conspiratorial currents.

Conspiracy theory, in its documents and videos, often requires dramatized staging and music, the accumulation of often unverifiable arguments, the

culprits identified explicitly / implicitly, interrogates the viewer's recurring patterns to instill doubt.

Examples:

The Coronavirus epidemic was intentionally created by governments to decimate the poorest populations.

Vaccines are used to remotely control people by injecting a microchip.

The debate on conspiracy theories is truly boundless. History teaches us that it is necessary to distinguish between real plots, which certainly existed, and imaginary plots, made up by people or groups of people who do not trust governments and, more generally, the Power or, better, the "strong Powers". Often this distinction is not easy, so that on certain relevant cases we are still navigating in the dark.

The theses of the conspiracy theorists are now quite widespread, supported by people with little critical spirit and strong preconceptions.

Many plots or, to be exact, conspiracies have been unmasked over time and this should teach us not to be too hasty in categorizing alternatives to current narratives as "delusional" currents of thought.

Example: false evidence of weapons of mass destruction that served as a justification for the American intervention in Iraq in 2003, notably through the declaration of Colin Powell (US general and secretary of state) in February 2003 to the UN, where provides (in fact fabricated) evidence of Iraqi production of weapons of mass destruction.

8 - Pseudo sciences

Arguments presented under scientific appearances or falsely attributed to science, but which do not follow any methodological line nor can they be recognized by the scientific world.

Objective: to take credit, legitimacy and recognition of science, of scientists.

Example: a pharmaceutical company announces that its new product is effective in 25% of cases, not remembering that a placebo achieves the same result.

9 - Alternative facts

This term was popularized by Kellyanne Conway in January 2017, then a White House advisor to Donald Trump: it designates a reinterpretation of

objective facts. You use this term to qualify the words of Sean Spicer, a spokesman for the White House who wrongly stated: "President Trump's inauguration ceremony attracted the largest audience ever to attend an inauguration." All available objective data showed that his claims were false.

10 - Image manipulation

Another characteristic form of Fake News is the use of various ways of manipulations of videos and images. The Internet user is very "visual", so a manipulated or out-of-context picture can be easily advertised as true.

Image manipulation has been around for a long time. An example is the retouching of the official photos of the Soviet regime, in the middle of the 20th century. A photo of Stalin from 1926 underwent two changes to obliterate political enemies who, sometime after the original shot, had been expelled from the party or killed.
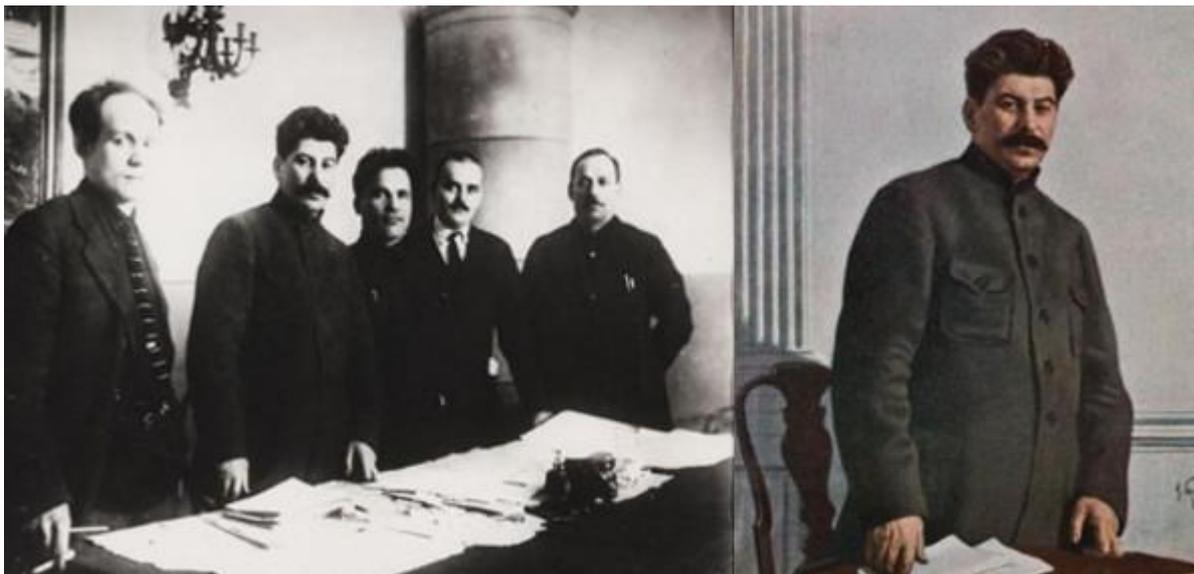
Left, original photo of Stalin with party leaders Nikolai Antipov, Sergej Kirov and Nikolai Shvernik. Right, postcard with the modified photo. Collection of the David King Collection at the Tate/BBC

All the types described above can use video channels such as Youtube and not just necessarily websites or Social Networks. There are hundreds, if not thousands, of Youtube channels dedicated to spreading totally false information on any subject.

False scientific news: perception, persuasion and literacy

Introduction:

The fine line that separates fact from fiction is increasingly hidden, creating parallel realities that cloud the vision of society.

This paragraph explores the understanding of which elements determine the credibility of scientific fake news or not. The main concepts to clarify this question are *perception* and *persuasion.*

Scientific dissemination is the communication activity, aimed at the general public, of academic notions and research in an accessible and easy-to-understand form. Its relevance for the circulation of information on science in society is undeniable, it also allows non-experts to inform themselves, understand and become curious about many issues and to actively participate in this culturally dynamic process.

The dissemination work is not limited to scientific articles, which are often too technical. News concerning science and technology is now available and present in various spaces: television programs, magazines, newspapers and, massively, also on social networks. But all the news circulating on these media could be false.

In the current situation, the circulation of information is no longer exclusive to journalistic media or the official means of scientific dissemination. Today, users of social networks have the most diverse information at hand and share them with a huge audience. This is perhaps a great opportunity for the democratization of information but this virtual territory is full of pitfalls between reality and fiction.

It is important to try to understand the reasons that contribute to the spread of fake news. It is necessary to ask ourselves what are the elements that endorse the credibility of scientific fake news as the strong dissemination of information through social media can influence the decision-making process in society.

The era of disinformation: perception, persuasion and fake news

In 2016, the Oxford Dictionary chose post-truth as the word of the year. In that context, two emblematic events took place: the United Kingdom's exit from the European Union and Donald Trump's victory in the presidency of the United States. In addition to sharing the same year, the two events shared a high rate of spread of fake news, mainly through social media. For this reason, that year the word post-truth stood out: in post-truth, the news is perceived and accepted as true by the public based on emotions and sensations, without any concrete analysis of the actual truthfulness of the facts told: in a discussion,

characterized by "post-truth", objective facts - clearly established - are less influential in shaping public opinion than appeals to emotions and personal beliefs[4].

Emotions and personal beliefs have a great impact on the formation of the perception that the individual has of the world around him. Perception concerns "the organization and conscious interpretation of sensory information"[5] therefore there is no single form of perception, since there are different ways of interpreting and relating to the individual repertoire of information or knowledge that each one possesses.

However, the perception may also be not aligned with the real facts. When not aligned, alternative realities are created that are not based on verifiable facts and data, but on personal and subjective perceptions and emotions. In this way, a distortion of real events is possible.

An example of how perception can be wrong is the third person hypothesis, defined by sociologist Walter Phillips Davison, or the tendency to overestimate the influence of mass communication on the attitudes and behaviors of others, but not of oneself. In other words, the negative effect on other people is overrated and the negative effect on oneself is underestimated.

In this sense, the perception of what is true or false can be manipulated by exploiting, for example, emotions and personal beliefs, "blinding" the perception of facts - or rather, leading to the world of post-truth.

However, it is important to consider that post-truth is not about overcoming a moment when there was only pure and objective truth, on the contrary: that moment never came. Fake news has always existed and will always exist, the central problem is the ever-faster momentum they have acquired.

And it is precisely the speed of diffusion that constitutes the power and danger of fake news, which are spread through various social media such as WhatsApp, Facebook, Twitter, among others. The news takes shape, spreads like a real virtual fire and, in this way, consolidates opinions and presumed knowledge on the most varied topics.

Another factor that favors the credibility of fake news is persuasion: already around 350 B.C. it is described by Aristotele as dependent on three variables: *logos, pathos and ethos*.

Logos refers to the logical way in which the speaker expresses the speech.

Pathos is in the way the speaker evokes the emotions of the audience.

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[4] Accademia della Crusca Viviamo nell'epoca della post-verità?

[5] MYERS, DG; DEWALL, CN *Psicologia* 11. ed. Rio de Janeiro: EDEL, 2017.

Ethos is how the speaker presents himself as a competent figure.

In other words, for a lie to take the form of a possible truth, there is an appeal through the discourse of rationality and emotions. Here is an example of how a piece of fake news can be configured, according to the Aristotelian variables:

ETHOS	Guys, good afternoon. I was here at home listening to Byoblu. I am also trying to go to the site to see if I can download the interview. Today they interviewed the famous virologist Mr.xxx talking about the vaccine ...
LOGOS	Guys, this is very dangerous! He said anyone who does this will have severe reactions. You will have no escape: everyone will have problems. And he said 50% of cases…
PATHOS	…they come to ask for help and treatment ... Think very carefully before giving yourself this vaccine and before giving it to your children...

The persuasive structure of fake news

In the above transcription, the ethos is evoked both by the figure of a well-known "alternative" information website and by the figure of an expert. In the second, the logo is presented through the use of numerical and statistical data used in the health sector, expressing rationality and logic. Finally, pathos appears when it is said that such a vaccine could lead to the deaths of children and adults.

In this way, the fake news ends up persuading and influencing the greatest number of people. Adding to this the high speed of sharing, the consequences can be the most worrying, such as remaining in the health sector, the possible reappearance of diseases already eradicated or, on the political scene, elections based on lies and manipulation, thus constituting a threat to society and democracy.

Therefore it is necessary to think of actions and interventions that can stem the phenomenon by promoting better skills and forms of active citizenship.

Media and Information Literacy: a journey towards citizenship

Building citizenship education implies awakening autonomy in the subject to critically weave his own points of view on reality. It is a question of not living passively, naively consuming everything that is proposed and offered to us, but of having a more central role in this discursive plot.

Two relevant concepts are *media literacy* and *computer literacy*.

Literacy concerns not only the domain of reading and writing, but also the awareness of being an active subject within social practices.

Media literacy refers to the ability to access media, to understand and critically evaluate different aspects of media and their content. Media literacy also includes the ability to create communications in a variety of contexts. Media literacy represents a major challenge for the European Commission, insofar as it helps to provide European citizens with the tools to better understand the digital environment, which is increasingly prevalent in European society[6].

In this context, information competence refers to:

definition and articulation of information needs;

location and access to information;

organization of information;

ethical use of information;

communication of information;

use of ICT skills (from English information and communications technology) in information processing;

While media literacy is related to:

- understanding the role and functions of the media in democratic societies;
- understanding the conditions under which the media can perform these functions;
- critical evaluation of media content;
- commitment to the media for self-expression and democratic participation;
- review of skills (including ICT) necessary for the production of content by users;

Media and information literacy can allow citizens to be educated in the perspective of fundamental human rights, through which the subject can communicate, transmit and receive information autonomously and judiciously, actively corresponding to the current communication context. Such literacies

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[6] https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=LEGISSUM%3Aam0004

can, therefore, allow the subject's dialogue with society so that he can relate more consciously with the media and through them.

Media and computer literacy are necessary, above all, from the perspective of a science teaching that is more contextualized with the new needs of a more aware reading of the world.

Therefore, teaching science is "teaching to read its language, understand its syntactic and discursive structure, the meaning of its vocabulary, interpret its formulas, diagrams, graphs, schemes, tables, etc."[7]

The articulation of media and information literacy with scientific literacy increases in citizens a more autonomous and critical vision of reality. It is important to consider that, in a democratic society, people ideally exercise great power over the decisions and policies adopted by the government. It is not difficult to see that a scientifically illiterate population will fail miserably in encouraging their policy makers to make informed decisions on scientific matters, whether it is something as small as protecting a local community or something on a global scale, such as raising the sea level or medical research.

Scientific, media and information literacy can awaken both the awareness that reality is made up of prejudices that are interpreted within a social context, distancing itself from the verification of hypotheses that aim at a strictly objective, independent and consequently measurable reality, according to a positivist perspective and the ability to take a less conformist view of issues of individual and collective interest at the local and global level.

Some statistical considerations

Numerous researches and studies are conducted all over the world to understand in detail the psycho-sociological dynamics underlying the phenomenon of fake news.

It is worth reporting some of the most salient data that emerged.

In a research conducted in Brazil[8] in 2019, 232 subjects of different ages, professions, education level, were interviewed by an online questionnaire through which various aspects were examined:

- the frequency of use of social media;
- the level of trustworthiness of social media;
- the motivation to share fake news;

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[7] SANTOS, WLP Science education from the point of view of literacy as a social practice: functions, principles and challenges. Brazilian Journal of Education, Rio de Janeiro, vol. 12, no. 36, p. 474-492, 2007

[8] *False scientific news: perception, persuasion and literacy* - Sheila Freitas Gomes, Juliana Coelho Braga de Oliveira Penna, Agnaldo Arroio

• the effect of fake news on another person;
• the relationship between education and credibility of fake news;
• the relationship between family income and trust in fake news;
• the basis for judging the news as true;
• the comparison between fake news and a real one shared by WhatsApp.

Results and discussions

Regarding the consumption of social media, the survey participants were asked how often they use digital platforms: Facebook, Instagram, YouTube, Twitter and WhatsApp.

Among the social networks, WhatsApp stands out as the most used, followed by Facebook, Instagram and YouTube, while Twitter has been identified as the least used by the participants.

Subsequently, they were asked to rate 4 fake news stories that appeared on four different social media sites as false or true.

● On a blog the news concerned the death of 37 million bees due to the sowing of genetically modified maize;
● The news shared on Twitter concerned an alleged machine that separated the colored balls with quantum physics;
● The news shared by WhatsApp concerned an alleged maculopathy, described as eye cancer, caused by the excessive use of cell phones in the dark;
● The Facebook news reported a cockroach that, if touched, would presumably infect the person with a virus capable of piercing the body;

Among the fake news presented, those published on the Blog and Twitter had the highest credibility rate.
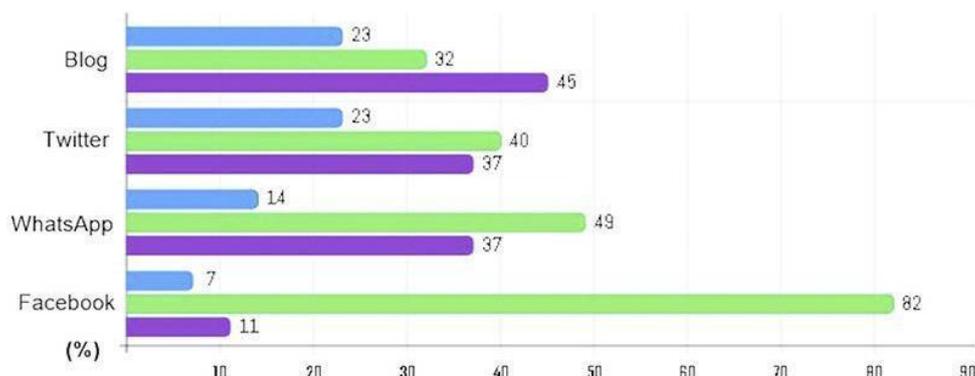
Blue: tends to believe – Green: tends to not believe – Violet: in doubt

It is important to consider that the highest percentages of credibility in the news were concentrated in those that best-articulated ethos and logos. The use, for example, of scientific jargon such as "genetically modified", "quantum physics" and "maculopathy" has shown greater persuasive power, namely logos. The citation of an authoritative and competent figure, such as a researcher, led to the ethos. Fake news that had more emphasis on pathos didn't get much credit, like those posted on WhatsApp and Facebook, especially the latter, which featured mostly pathos.

Subsequently, participants were asked if they felt motivated to share the news presented. Interestingly, while attendees were relatively less suspicious of the news on Twitter than the one posted on WhatsApp, the latter was more willing to share.

Another analysis was carried out concerning family income and its relationship with the recognition of fake news. In this sense, it was found that the lower the family income, the greater the probability of believing in fake news, consequently, the higher the family income, the lower the probability of believing in fake news.

Similarly, an analysis was performed between the identification of fake news and the education level. It has been found that the lower the level of education, the greater the chances of believing in fake news.

Another question was about what elements the participants chose whether the news was true or false. The majority said they were confident if the news was posted on reputable websites (55%), followed by those whose criteria were scientific content (23%), their knowledge (20%) and the people or groups that shared with them the news (2%).

"Scientific content" and "My knowledge" are answers that together see a considerable number of participants (43%). Note that most fake news appropriates scientific terms (logos and ethos) to gain credibility and that personal knowledge or beliefs can also be easily mobilized to persuade readers, mainly through pathos.

In addition to the four fake news, a real news shared via WhatsApp was included in the survey, for comparison purposes. The news in question reported that a remedy for hypertension had been developed from snake venom studies.

However, the real news, which should have had the highest percentage of people confirming its truthfulness, had the highest index of doubt (44%), followed by the index of those who declared it false (37%) and, finally, those

who judged it to be true (19%). This result highlights the problem with the strategies people adopt to verify the sources of a news story.

Final remarks

The study aimed to capture and interpret, in the light of perception and persuasion, which aspects lead people to share untrue news, especially of a scientific nature.

The results suggest that the use of persuasive speech is essential for the effectiveness of fake news. Fake news that presents more pathos is more discredited, while those that better articulate the three discursive pillars are more successful.

- It has been identified that the use of scientific jargon in the structure of fake news leads to make them more credible.
- Another aspect noted is that, depending on the platform on which the news is broadcasted, people feel more or less inclined to believe in it and to share it.
- Regarding the motivation to share, it was interesting to note that, compared to Twitter, WhatsApp had more intention of sharing, even though it was identified by more people as a potential bearer of fake news.
- The third-person effect has been identified as the possibility that other people are more likely to be deceived by fake news.
- People with the least education and family income appear to be the most vulnerable to fake news.

However, we take into account the fact that even higher education levels are not exempt from adhering to fake news and "alternative" theories: much depends on the form in which this information is presented and on the more or less universal predisposition to fall into cognitive bias. Decision-making processes are, in fact, directly influenced by the following factors:

• individual experience;

• cultural context and beliefs;

• judgment of others;

• mental schemes;

• fear of making a decision that causes harm;

Other interpretations of this behavior can be explained by psychology. One of these is the so-called wishful thinking. It is a mental process through which we interpret facts according to our wishes rather than reality, denying what objectively happens. Other compliant attitudes are selective attention and

selective memory. In both cases, only favorable hypotheses are captured, discarding or not remembering everything that interferes with our interests.

Finally, we find the principle of social proof: the more people confirm an idea, the more value it assumes. This social influence pushes people to conform in behavior (thoughts, feelings, actions) to that of others, that is to conformism (see also the works of Asch, 1956; Milgram, 1961; Festinger, 1957).

- People who claim to judge news as true because it is published on reliable sites have turned out to be the very ones who do not, relying on their knowledge and scientific content to consider what is and is not a fact. There was also a contradiction in how the participants judged the truthfulness of the information. They claimed they did this through reputable websites, however, when they stumbled upon real news, they were in doubt and ended up judging it as more false than true.

All these elements identified in the study suggest the urgency for media, information and scientific literacy to mobilize to form more autonomous and committed citizens and less susceptible to emotions and beliefs, as can be seen in this historical moment characterized by post-truth.

This challenge must be acknowledged as soon as possible by the school educational context and, above all, in the training of teachers so that they can design more effective educational paths targeted to a society increasingly symbiosis with the Internet.

What is the role of the school in this universe of disinformation?

Credits: https://pixabay.com/it/photos/insegnante-sachunterricht-3765909/

With the spread of mobile phones and tablets, children interact very early with technology and different sources of information, both text and images.

Socials, videos, TikToks, messages and links shared on WhatsApp are just a click away. Before even starting school life and learning to read, children are already exposed to different types of media. They already know some tools and start expressing their opinion publicly, commenting on content and even producing videos.

The challenge for teachers is to train critical citizens in a virtual-centric world:

1) how to train people who have a critical approach concerning the use of social media and the quality of the information they find.

2) Why is it the teacher's responsibility to think about students' use of media?

What is media literacy?

The definition of literacy boils down to the ability to read and write. From the recognition of letters and words, the individual who is developing these skills, in addition to identifying them, begins to understand their meaning and to interpret the meaning of that set of sentences. Media literacy follows much the same process but includes the ability to identify different types of media and interpret the information and messages sent by those media. This includes not only textual content circulating on social media, but also memes, viral videos, video games and advertisements.

The look at the development of digital literacy must be judicious, literacy is not promoted simply by creating situations of interaction with digital, but by placing them in the context of the classroom, both as a means and to encourage the use of technologies and various platforms for the development of skills and competences, both as core activities.

In the context of digital literacy and the need to create connected and ethical citizens, it is worth encouraging research on trustworthy websites, reading and analyzing fake and real news and subsequent discussion of their reliability, and raising questions about authorship, plagiarism and information quality.

These discussions promote students' protagonism, allowing them to identify reliable sources and resources for learning and do not require the teacher to have a technical mastery of the resources: the role of the teacher is to mediate this process, motivating and stimulating students and being the facilitating agent of digital literacy and the process of forming ethical guidelines. If the teacher fails in this leadership role, the student will not develop mechanisms that will allow him to be autonomous in these processes and, therefore, ends up being a vector of disinformation.

New technologies present us with new challenges: how can we orient ourselves in this wealth of information? What is relevant and what is not? Which sources to trust? What is serious, what is biased or even propagandistic? Does the information and news suggested and displayed on social networks reflect a broad and representative spectrum of opinions? The reliability and truthfulness of the information is put to the test due to the rapid spread of false news.

Right at the beginning of the pandemic, WHO's (World Health Organization) general Director Tedros Adhanom Ghebreyesus said, in April 2020, that the world was not only struggling with an epidemic but also with an "infodemic". This term, according to the WHO, refers to a large volume of information associated with a specific topic, true or not, which multiplies

exponentially in a short time due to a specific event - such as the current pandemic.

In this context, fake news is born. Before the pandemic, this problem was already on the rise around the world. But the arrival of a new virus, which has brought more questions than answers, has helped to spread the discussion on fighting disinformation and fake news. School, as an integral part of society, can also help in the fight against fake news.

In addition to fighting fake news, schools need to understand the concept of media education. Fake news is just the tip of a much larger iceberg that implies the ability to access, analyze, create and participate in the information environment **more critically and responsibly.**

Therefore, it is important to promote discussion about the consequences of this type of news, as well as the control of information, which can be verified by comparing and analyzing texts on different media, as well as using online verification services.

Working with fake news in the classroom is, without a doubt, a way to allow students to correctly understand and analyze the information they receive on social networks.

This type of news requires greater concentration on the work of interpreting the text, followed by a critical debate on fake news.

Since 1984, Esther Wojcicki has been teaching English and high school journalism at a California public school, the Palo Alto High School Media Arts Center. In this school she teaches young people how to debate their ideas and encourages their autonomy and critical thinking. The methodology was initially "tested" with her daughters, whom she encouraged to think for themselves. With the rise of fake news in the media, her work began to attract more attention for having always been based on making students think and develop critical thinking.

Esther believes that **education has a very important role to play in dealing with fake news**, which has gained prominence on social media. For her, if the topic were part of the students' curriculum, once they reach adulthood they would have no problem identifying what they read. *"Children need to know that they need to question themselves, be suspicious and know what sources to seek information from, no matter if they are only 10 years old. We must teach them to question what they read as soon as they learn to read".*

But it's not just children and young people who get carried away by what they read. Millions of people around the world are the perfect target for fake news: people who read something and, simply, believe it.

Esther points out that there is a discrepancy between the education practiced by the school - which is still very much linked to the twentieth century - and the education that today's world requires to deal with all the information and possibilities provided by technology. *"We have to change the way we teach because the way we learn has changed,"* she points out. In her opinion, a clear example is that many schools and teachers still insist on "memorization". *"Currently, 80% of the time in the classroom is spent with the old teacher teaching scheme. In just 20% of the time, we let the children rehearse for themselves"*, she estimates. Students memorize the content for the questions, but then end up forgetting most of what they have studied. This is because all of this information, and any other, is available with just a few clicks on their cell phones.

Like technology, the communication involved in the teaching and learning process is constantly evolving. For this reason, it is no longer possible to find oneself in front of a classroom with the expectation of capturing the attention of an entire group of children and young people and of using the language of the last century. Today it is no longer possible, for example, to talk about ecology, without talking about sustainability and clean technologies.

To establish true communication with the reality of the students of the new generations, the teaching and learning process must invariably take into account and use technology.

Educational technology emerged from this need.

Educational technology is a concept that relates to the use of technological resources for educational purposes. Its goal is to bring innovative practices into education - both inside and outside the classroom - that facilitate and improve the teaching and learning process.

Educational technology can be present in education in several ways, some of which are:

- in gadgets (devices), such as digital whiteboards, tablets and didactic tables;

- in software such as applications, games and digital books;

- in other educational solutions, such as augmented reality, virtual learning environments and video platforms.

Photo by Van Tay Media on Unsplash

We've listed **7 reasons** why using digital technology in the classroom can improve your students' performance

1. Digital technology arouses more interest and captures the attention of students. The use of digital technology in education greatly contributes to the involvement of students in the dynamics of the classroom. The human mind is passionate about new things. Therefore, it is important to vary your study routine, make small changes to the location, and most importantly, experiment with different tools and technological resources. When new ways of teaching and learning are sought, an aura of novelty is given to the study routine, making it more interesting and enjoyable. As a result, students' attention and interest in the topic in question grows.

2. Digital technology helps to realize and solve real problems. Much of the recent articles and discussions in the field of education (including the recently approved Common National Curriculum Base) state that it is necessary to bring the studied contents closer to the reality of the students. Try to give a more practical sense to your discipline, both by contextualizing the information (application in real situations, presenting local cases) and the means used to transmit it (digital technologies, channels frequently used by new generations). This helps not only to understand the content but also to visualize and solve real problems that arise in the student's daily life.

3. Digital technology inserts young people into the social debate and contributes to the formation of a critical sense. One of the main benefits of applying digital technology in education is the ability to access updated information in real-time. No more waiting for the paper textbook to be updated to access current topics, recent college entrance exam issues, up-to-date data, and relevant social debates. Working with up-to-date information helps to engage students in social debate and develop their critical and argumentative sense, preparing them at the same time for the challenges of social and academic life.

4. Digital technology operates responsibly in the use of the Internet and digital resources. Digital technology is present in the life of the new generations from an early age. It is extremely common to see preschoolers using tablets and smartphones, for example. The inclusion of technology in the school environment helps to establish rules of coexistence and safety in virtual environments. It is also a good opportunity to work responsibly in the management and storage of digital equipment.

5. Digital technology helps democratize access to education. Today there are several tools and methodologies developed to help education professionals to promote the democratization of access to education and to work towards more inclusive education. The use of digital technology in the classroom (in the form of audio, visual and written resources, for example) can give more autonomy to students with disabilities, learning disabilities or problems, helping them to overcome limitations and develop their potential to their fullest.

6. Digital technology provides immediate and constant feedback to teachers, students and mentors. In schools using a virtual learning environment (VLE), the transfer of assignments and assessments into the digital environment is a way to generate immediate performance data for teachers, students and mentors. In this way, the student can correct mistakes while the content remains "fresh" in the memory, instead of discovering days later (or only at the end of the quarter) that, all along, his performance has been below expectations. In addition, teachers and tutors closely follow the evolution of each student, intervening and directing the studies as needed.

7. Allows you to develop an appropriate teaching plan for each student. Digital technology makes it possible to generate a large amount of educational data. It is possible to identify themes and concepts in which students have greater ease or difficulty in understanding, as well as check the performance of the class and each student. The analysis of these data gives teachers, parents and students autonomy to develop a personalized teaching plan, more suitable for each class and student. It also allows the student, in the more advanced stages of basic education, to direct their learning towards their areas of interest and the training they intend to follow.

It should always be clear that digital technology is not a miracle solution for improving student performance. Technology is not the end, but how teachers and education professionals will develop their pedagogical practices, defining the tools and solutions most relevant to the reality of each school, class and student, as well as the best way to use them in the teaching-learning process.

Another key to developing both critical thinking and self-confidence to explore new paths and express opinions would be to work in schools with values such as trust, respect, independence, cooperation and kindness.

If you trust yourself and people trust you too, you feel more willing to take risks and ask questions, exemplifies Esther Wojcicki. The same does not happen when you are conditioned to simply follow the instructions provided.

As a teacher and journalist, Esther Wojcicki says the journalistic process can teach students a lot. *"I think journalism is the key because kids need to know what news is, what a hypothesis is, and what a piece of opinion is"*, she says.

Six premises are fundamental for anyone who wants to question the reading of a content:

1. SOURCE

The first question is: who wrote this text or captured this video or took this photo? Look for information about the author of the content, the name of the publication on which it is published, and who is related to the publication, such as founding institutions and political associations. If the text has no author, be suspicious. If so, ask yourself: is the author trustworthy? Is he an individual? Does he represent an institution? Is this institution a reliable information vehicle or is it associated with specific interests? Researching the author's name can help recognize the credibility of the source of information. Also, check if the site has an "about us" section. If there are other sources cited in the text, research those as well.

2. EVIDENCES

Search the text for information that you can verify, such as names, data, locations, and citations to documents or searches. Ask yourself: what information is used in the content to support the facts? Do the presented facts support this information? Are the presented data statistics from a reliable source of information or they are not even mentioned in the text? Generic quotes like "according to polls" or "studies claim" are common in fake news and related genres. The observation of the presence of quotation marks of a person cited in the text should also be subject to observation. Other questions should also be asked relating to the speeches of the experts and of the people mentioned in the text: who is this person who is speaking? What is his professional role? Does he have the skills to talk about this topic? Is there any evidence that he is telling the truth? Look for other news from reliable sources that report the same interventions.

3. BACKGROUND

All news exists within a context. This context is complex: it is historical, social, economic, cultural, temporal... Ask yourself: what is the general scenario of this news? Does it present a complete picture of the story or does it omit

information? What is left out of the text? Does the context in which that news was published have any other related events (such as elections) that may have generated that content to influence opinion? Consider the different forces around this fact, such as current events, cultural trends, political goals, and financial and market pressures.

4. REFERENCE PUBLIC

Understanding whom the content was created for can also help identify if there is any bias or intentionality that isn't visible at first glance. What is the intended target audience? Are they people who share a common interest? What is the interest of the group? Does the presented information only support this view or does it also present alternative data? Pay attention to appeals to specific groups or individuals. This information may not be directly present in the presented information in the text, but also in the language used by the content, techniques for presenting the points raised by the text (which can, for example, seduce the reader and lead to a tendentious conclusion) and choice of images.

5. PURPOSE

All news shares the fact that it was created by someone and with a purpose. Understanding why it is the basis for media literacy. The key question is: why was this text written? Is it to inform about an event? Is it to convince you of something or some argument? Who can benefit from the circulation of this information? Is it to convince you to buy something? Is it for fun, like in the case of satires? Observing factors such as the mission of the newspaper in which the text is published, persuasive language or the use of images, techniques for making money (click-hunting) and declared (or undeclared) positions on the subject can give clues as to the purpose of the content in question. Also, the user may wonder what feeling that message causes.

6. EXECUTION

How content is produced and presented aesthetically also provides clues to the veracity of what is being conveyed. Style of the text, grammar, tone, choice of images, positioning and layout are some elements that can give indications on the credibility of the publication. The main question about enforcement is: how is information presented? Are there adjectives that can distort the reading? Are there any capitalized words in the title or body of the text? These characteristics are often used to create emotional reactions in

readers and are avoided in journalistic texts. Does the page design and font choice look bad or does the text look poorly written? Low quality is also characteristic of fake news.

Another essential question is: what is the page URL like? Most reliable URLs end with ".com", ".net", ".org" and government URLs with ".gov". Those with dubious content often use other domains, such as ".co" (which can also be the domain of sites in Colombia, but if you see content in your language in a Colombian domain, be careful!). If the domain is ".wordpress" or ".blogger", it is worth remembering that these are usually personal blogs and, therefore, are only the opinions of the writer, which do not necessarily correspond to the truth.

Furthermore, some sites tend to use addresses very similar to those of credible publications, even copying their layout (but without the same quality). At a quick glance, they can be easily confused (as in the Phishing phenomenon, computer scams carried out by sending an email with the counterfeit logo of a credit institution or e-commerce company, inviting the recipient to provide confidential data (credit card number, password to access the home banking service, etc.), justifying this request with technical reasons).

Random URLs with strange names are also very suspicious.

Remember that there are different levels of sophistication in fake news. Some get suspicious right away but others don't.

From this learning to ask basic questions, the individual begins to question not only the media, but also other things they consume, such as whether the company that makes the clothing or product they usually use is accused of slavery or exploitation of child labor.

EXERCISES WITH STUDENTS[9]

Lesson Plan: Digital Literacy and Fake News: Ethical Thinking and Action

Fake news is no longer a simple matter of occasional fake news. Fake news has the power to influence public opinion and even influence elections.

Students must be able to verify sources and identify false news and manipulated images, which often appear indistinguishable from a reliable source. This lesson asks students to analyze the consequences of fake news and build the skills needed to question and verify what they view online.

Recommended time: 90 minutes (two lessons)

Skills:

Responsibility and Citizenship: Acting personally and collectively with autonomy, responsibility, flexibility, resilience and determination, making decisions based on ethical, democratic, inclusive, sustainable and supportive principles.

Communication: use different languages - verbal, written, corporeal, visual, sound and digital - as well as the knowledge of artistic, mathematical and scientific languages, to express and share information, experiences, ideas and feelings in different contexts to produce meanings that lead to mutual understanding. Knowing how to distinguish facts from opinions or suggestions in texts (informative, journalistic, advertising, etc.). Compare information on the same fact published in different media and be able to discern which is more reliable and why.

Action field:

Daily life: participation in reading and writing situations in which the context are activities experienced in the daily life of children at home or school, mainly on social networks and digital communication resources such as WhatsApp and Twitter.

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[9] https://cdn.kqed.org/wp-content/uploads/sites/26/2016/12/Fake-news-lesson-plan.pdf

Public life: field of action relating to participation in situations of reading and writing, in particular texts in the journalistic, advertising, political, legal fields, on issues that affect citizenship and the exercise of rights. Mainly those that circulate on social networks.

Object of knowledge:

- Digital literacy and understanding of texts and information.

- Students will analyze the problems and potential consequences associated with the spread of fake news.

- Students will identify and evaluate ways to avoid fake news in social and academic contexts.

Lesson guidelines:

The teacher should first organize a conversation circle to discuss the use of social networks and communication groups such as WhatsApp. Questions such as:

- How do we relate to people in our daily life through social media?

- Do we value well what we write to others? Why do we use so many social networks and WhatsApp to talk and interact?

- When we receive news and communications, do we always and immediately share them with other people and groups?

- What messages do we share the most with people? Accusations, calls for help, political issues, social media jokes?

- What are the potential consequences when fake news goes viral? Do you think you can spot fake news or would you be fooled? Why?

- What actions can I take to verify news, photos and other sources of online information?

- Allow students to write their thoughts before discussing the opening question to increase participation and make the discussion more organic.

What we need to work on is students' collective awareness of what they share and how they interact with technology-mediated language.

The teacher should ask if the students have an idea of the amount of time they use their mobile phones. Many mobile phones have this tool available to calculate the number of hours of use per day or week.

You can create a board to put in the classroom and make students think about it: if we spend so much time (x hours) using mobile phones, communicating and interacting with people, do we realize how deleterious and counterproductive it would be if we shared false messages with our friends and groups?

WHEN YOU SHARE A FAKE MESSAGE, HOW MANY PEOPLE DO YOU REACH?

In the next lesson, propose to the students the analysis of some news according to the following structure: (the teacher must select true and false news so that the students can work on the identification).

- Research the original source of the news;
- Search the same information on other important sites and sources;
- Be wary of too sensationalist titles;
- Pay attention to the date on which the news was published and compare it with any duplicates online.

After searching for evidences and useful clues, students will discuss as a group the plausibility of the news they believe to be true and explain why others consider them to be false.

The teacher can create a poster with false news on one side and real news on the other and the related reasons.

By building arguments based on context, research, careful analysis of texts and sources, we will encourage students to be more cautious about sharing in digital communications.

The teacher can then conduct a test with the students to see if they have learned the subject.

Then we will have to make students reflect on the impact and consequences that fake news can have on a person's life. In this way, we will

work on the dimension of personal action and of the collective and public consciousness that we must build.

After the research, which could be carried out in groups or pairs, the results will be shared among the students and the ethical and citizen action that we can all develop will be discussed.

Activity: Evaluation of an online image

● Show students this picture of "mutant daisies".

https://www.thinglink.com/scene/901866337918255105
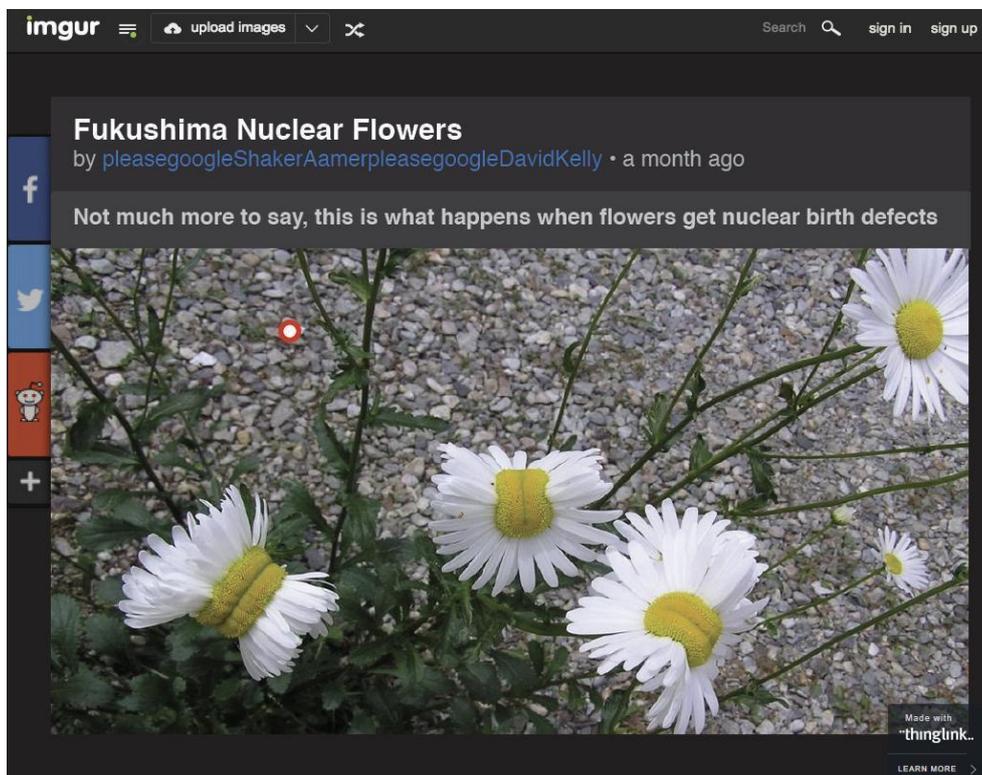
● Does this image provide firm evidence of the conditions near the Fukushima plant? On what basis do you have this opinion?

● Following the emotionality, the students could affirm that the image is true and that the daisies are born in this way due to the radiation.

● Help students with the questions they should ask themselves about the photo.

- List the reasons why this image should not be trusted to confirm the nuclear contamination of Fukushima based on it alone. (ex: we don't know the photographer's credentials, there's no way to know if the daisies are near the power plant or if the radiation caused the mutations or even if the photo was really taken in Japan!)

In fact, the image was not manipulated, according to Snopes. Daisies were born like this. Although it is natural to believe that the strange appearance is due to a dose of radiation, in reality, it is a common phenomenon called "fasciation", caused by a hormonal imbalance, although this imbalance can be triggered by several things: insects, disease or physical injury to the plant[10].

Debrief revealing that fewer than 20% of high school students correctly evaluate the image or ask the above questions.

Remind students that there are many fake images and news online. Ask: what will you do next time? What will you do every time?

What can companies like Facebook and Snapchat do to stop users from spreading fake news? What can ordinary people do? What do you think would work, especially with younger users?

Small group discussions and sharing thoughts in pairs provide an easier space for students to practice speaking and listening and also increase participation in whole-class discussions.

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[10] https://www.smithsonianmag.com/smart-news/dont-freak-out-over-funky-flowers-appeared-near-fukushima-180956021/

Fake Video Exercise - Part 2[11]:

Educational goals:
- develop a critical mind about information and its processing and participation in collaborative work.
- evaluation of the influence of media and networks thanks to civic and social skills.
- adopt a critical and analytical attitude towards information and content disseminated through web tools (messaging, online media, social networks)
- use a collaborative writing tool to produce a common document.

Presentation of the action: the students analyze the validity of a fake news widely spread on the Internet and shared on social networks. By distributing the different tasks of gathering information among themselves, they collect evidence and then use collaborative writing to organize a final shared report.

- Material used: a shared Google account for students to collaborate on the same document from various workstations.
- Final production: a document that analyzes in every detail the strategies used to verify the reliability of the video.

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[11] Session inspired by: https://documentation-ac--besancon-fr.translate.goog/une-chasse-au-canular-collaborative/?_x_tr_sch=http&_x_tr_sl=fr&_x_tr_tl=it&_x_tr_hl=en-US&_x_tr_pto,elemax

Sequence:

Project or watch, together, the video "The eagle who wanted to kidnap the child" (https://www.youtube.com/watch?v=uEBOBOx3h-4)

We see an eagle grabbing a child and taking him away for a few seconds. This video should have been shot in Montreal in December 2012. The video has been broadcasted as authentic on some news sites and shared thousands of times on social media and on youtube itself in many languages.

Question and discussion on the veracity of the video.

- We analyze students' reactions and feelings, their points of view and the quality of the animation. Asking them to explain their reactions (it's scary, it's funny, it's awesome...) and what they usually do when they see this kind of sensational video on the internet (they show it, they share it...)
- Ask them if they think the video is reliable and why.
- Remind them that the first step in assessing reliability is to identify the document and evaluate its source.

● Ask them what elements of the video could be checked to assess the reliability of the information and record the elements in a table. If necessary, write down the column titles and ask them specifically what information to look for to verify and what tool to use for this search.

Definition of strategies and research paths to assess the reliability of the video or any deception.

Distribution of students into groups: each group will have to search for information to respond to a specific aspect of the video.

Points to be highlighted, to define the investigation strategies:
- Research on the strength of an eagle and the weight of a child
- Can an eagle lift such a weight?
- Look up information on the weather in Montreal in December 2012 and data from the video
- The weather looks sunny. Wasn't it snowing?
- Research on the distribution of golden eagles in the world
- Are there eagles in Montreal?
- Research on animation inconsistencies
- Detection of strange elements that require further investigation
- Help students in their research.

To finalize the work: research other analyzes made about this video.

Online resource: **hoaxbuster**[12], the site that reports much fake news.

Each group, in turn, explains the research carried out, the results found and the sources consulted, before concluding the reliability of the video.

Ask students if now that they know it is a fake, they would share the video: yes, but mentioning that it is a "fake"? Explanation of how Google Drive works and use of shared documents.

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[12] https://www.hoaxbuster.com/

Debriefing:

The idea is to make students more aware of the "virality" of information created from scratch and to think about how to provide them with a critical look at this type of content.

- Based on the conclusions of each group, infer that the video is a fake.
- Explain that verifying the reliability of information takes time and that there are tools to check if the content under "test" has been published with an earlier date. Presents Hoaxbuster.com. Shows how to check information via the search bar.

Conclusions:

The exercise on the kidnapping eagle is always a success. The students are impressed and enthusiastic about the investigation. The hardest part is not to reveal the truth right away because there are comments on the video that reveal the deception.

Unfortunately, on Youtube there is no indication about the date of first publication. And, to date, no "search" tool by "seniority" date.

Fake news: when are they a crime?

Image by Gerd Altmann from Pixabay

Under Italian law, some limits cannot be exceeded.

If the news was published in good faith, ignoring that it was false news, spreading it is not a crime.

However, if the news published and disseminated is exaggerated or tendentious and capable of disturbing public order, a crime is committed.

The law punishes anyone who publishes or disseminates false, exaggerated or biased news for which public order may be disturbed with an arrest for up to three months or a fine of up to 309 euros[13].

The crime exists when:

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[13] Art. 656 cod. pen.

the information is completely different from reality, in the sense that it completely distorted it;

the news is capable of disturbing public order, arousing concern, agitation or real alarm among the population.

The particularly worrying fake news can also integrate the crime of procured alarm.

By law, anyone who, announcing disasters, injuries or non-existent dangers, raises alarms at the Authority or entities or persons exercising a public service is punished with arrest for up to six months or with a fine of 10 to 516 euros[14].

In practice, unlike the first case, the fake news must arouse a specific alarm in the armed forces instead of disturbing, generically, public order and may even not have been published (in that case, the culprit would be indicted for the second offense, punished more severely).

In Italy, until 2016, those who spread false news risked being arrested for the crime of abusing popular credulity if their target audience was made up of people who were not particularly educated and manipulable.

However, this provision has been decriminalized and no longer constitutes a crime; the author of the fake news, however, risks incurring a heavy administrative penalty.

According to the Criminal Code, *anyone who publicly tries with any deception to abuse popular credulity is subject to a pecuniary administrative sanction from 5 thousand to 15 thousand euros, if the fact does not result in a more serious crime*[15].

In this case, the perpetrator of the conduct is aware of divulging false information and does so by taking advantage of the vulnerability of some people to believe imaginary or otherwise implausible facts. In such a case, the fake news is punished with a pecuniary administrative sanction if the false news is disseminated to take advantage of the credulity of the recipients of the news and is capable of disturbing public order.

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[14] Art. 658 cod. pen.

[15] Art. 661 cod. pen.

If the fake news is produced and disseminated with the specific intention of damaging the reputation of another person, on the other hand, the crime of aggravated defamation is configured, as the offense is carried out *using the press or other means of advertising (blog or social networks, for example)*[16].

The penalty for defamation through fake news is imprisonment from six months to three years or a fine of not less than five hundred and sixteen euros.

Even those who, out of pure negligence, publish false, exaggerated or alarmist news, deeming them to be true, risks a criminal trial (or having to pay a hefty administrative fine). This is the case, for example, of a journalist who, naively, does not check the reliability of the sources and publishes news relating to upcoming tragedies.

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[16] Art. 595 cod. pen.

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VACCINE AGAINST INFODEMIC THEORY AND PRACTICE

NAMOI

Subject: Fake news and disinformation in different school subjects

"The illiterate of the 21st century will not be

those who cannot read and write, but those

who cannot learn, unlearn, and relearn."

Alvin Toffler

Patriotic maths

School textbooks are often criticized for their propaganda nature. But usually we are talking about history textbooks (and will talk a bit later in this chapter). It turns out that even mathematics textbooks were guilty of this.

Air raid

The title of this book is long and very unusual: "5 soldiers can stretch 300 square meters of barbed wire in 2 hours ..." But the subtitle explains its essence: "The funniest mathematical problems from 1890 to the present day."
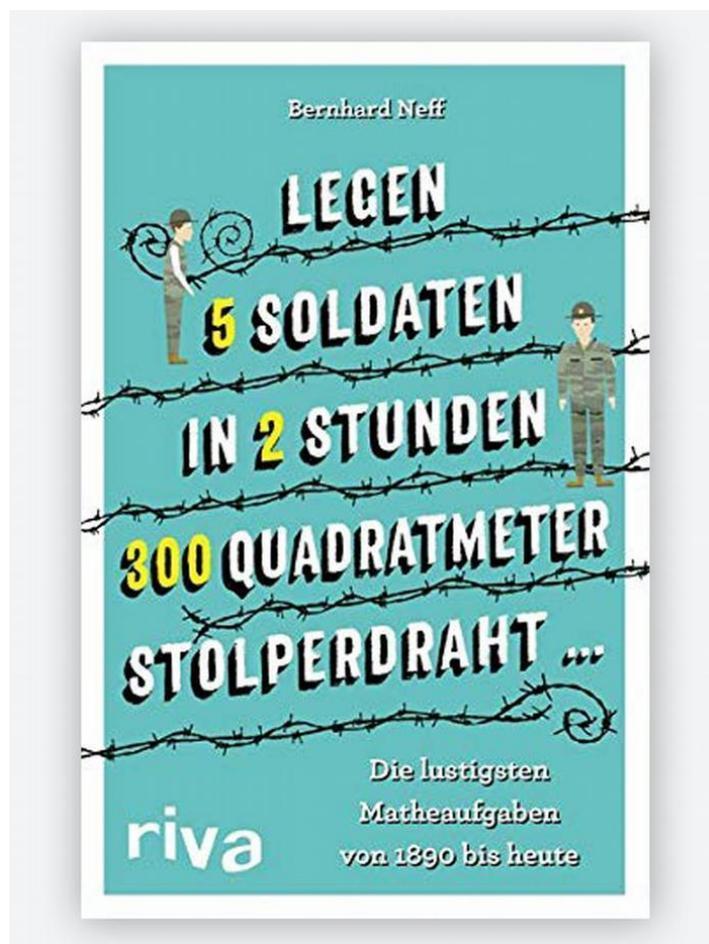
© Bernhard Neff; Riva.

Its author, Bernhard Neff, is a former mathematics teacher who worked in a German school for about ten years. Collecting funny, curious, grotesque and,

let's say, "specific" mathematical problems has become his hobby. Neff reviewed a total of 250 German mathematics textbooks and problem books, the oldest of which is almost one and a half hundred years old! And he found many examples of how ideology, political situation, social atmosphere determined their character and content at different times. The training manual, published in 1981 in the former GDR, even stated directly: "... Use in mathematics lessons the specific possibilities of the subject for the communist education of schoolchildren."

Which, of course, was done.

The statistical *advantages of socialism*

From a mathematics textbook for vocational schools, 1960:

"The level of higher education in the socialist countries is shown by the following examples: in the Soviet Union and in the United States, 416 people per million of the population of both countries receive engineering specialties every year, but in a ratio of 35 to 17. How many engineers receive higher education diplomas separately in the USSR and the USA? "

From a textbook on mathematical statistics for technical schools, 1976:

"According to the calculations of the Central Static Administration of the GDR, the level of industrial production in 1972 compared to 1960:

- in the GDR - 205 percent
- in the USSR - 261 percent
- in the USA - 71 percent
- in Germany - 87 percent.

Please add a graphic to the data and explain it. "

In general, the notorious advantages of socialism are evident. Judging, of course, according to the data of the Central Static Administration of the GDR.

But, of course, ideology determined the nature of mathematical problems even before the GDR, for example, in Nazi Germany:

From a problem book in mathematics for schools of working youth, 1941:

"In 1929-1935, on average, harvested (in centners per hectare)

- in Germany: wheat 21.7, potatoes 156.1

- in France: wheat 15.5, potato 110.0,

- in Poland: wheat 11.8, potatoes 112.7

The German peasant works the best!

Calculate as a percentage how much better. "

During the Third Reich there were also tasks about measuring skulls according to racial theory, and about how quickly a bomber flying at such and such speed can overcome the distance from Berlin to the border of Czechoslovakia, about digging trenches and barbed wire.

From a problem book in mathematics for schools of working youth, 1941:

"5 soldiers can stretch 300 square meters of barbed wire in 2 hours. How long can 20 soldiers last in 6 hours?"

This is the very task that gave the name to Neff's book. And here is another similar one.

From the 8th grade mathematics textbook, 1936:

"A, B, C and D must dig a trench together. One A would need 15 days to do this, B - 20, C - 24, D - 30. Before they started digging together, A and B were already working 1 In addition, C was out of work for 4 days, D for 3 days. How many days would it take for all four of them to dig a trench? "

The soldiers are marching

In National Socialist Germany, tasks with militaristic overtones were generally adored.

From a 4th grade mathematics textbook, 1941:

"A bomber can carry 32 bombs weighing 50 kg each. Each bomb can destroy one house. Calculate the danger that 27 bombers pose to a city with 25,000 houses."

From a primary school arithmetic textbook, 1940:

"The bomber is dropping a bomb at an altitude of 2100 meters. How fast and how long will the bomb reach the Earth's surface?"

There was also a lot of militaristic overtones in the former GDR.

From the math problem book for grade 10. 1988 year:

"The observation post of the GDR army sees a medium-sized tank approaching it at an angle of 0.3 degrees. Since the soldiers know that the width of this type of tank is 2.5 m, they can calculate the distance to it. How much is it?"

In math lessons in Kaiser's Germany, military uniforms also flashed every now and then.

From the Algebra Problem Book for Secondary Schools, 1917:

"The two warring armies of France (that is, France - ed.) And Ger. (Germany - ed.) Are separated by 200 km. The soldiers of the French march 30 km a day, the soldiers of Ger. - 35 km. How long will it take until then? when will the armies be only 5 km apart? "

Wife with a bucket of beer

But still, during the days of imperial Germany, the Weimar Republic and, of course, in the post-war Germany, there was much less "propaganda, agitation, manipulation and brainwashing" (Bernhard Neff's expression) than in the GDR or even more so in Nazi Germany. However, even there the author of the book found many mathematical problems, which he included in his selection, because they characterize a particular era in a very peculiar way. For example:

From the high school math problem book, 1912:

"The owner of the estate paid a total of 620 marks to the servants of 20. The monthly salary of a servant is 40 marks, a servant 25 marks. How many servants and maids work on the estate?"

It's not just the problem's outdated characters. We would like to draw attention to the aspect of equality (in the sense of equal pay) between men and women in 1912.

Difficult math problem

And here is a completely different, but also unthinkable task in today's school textbooks.

From a collection of exercises in mathematics for grade 6, 1910:

"One person drinks a bucket (German unit for measuring the volume of liquids - approx. 70 liters - ed.) Of beer in 18 days. If his wife drinks with him, they will drink a bucket in 12 days. How long does it take for his wife to drink a bucket of beer alone? "

Of course, the author of the book does not ignore the FRG either. In West German textbooks, there are also mathematical problems that are very characteristic of the way of life and thinking. For example, this.

From the high school math problem book, 1975:

"The entrepreneur calculated that 10 workers would be able to complete his order in 18 days. But 4 days after the start of work, 3 workers fell ill. How long will it take for the others to complete the order?"

"We'll have to sweat," Bernhard Neff ironically comments on this task. And he adds: "One should also ask how much healthy overtime workers will be paid." But I personally liked most of all the next task from the GDR textbook - in Roman numerals. Try it too, if, of course, you have not forgotten the Roman numerals.

From a 4th grade mathematics textbook, 1982:

"Read aloud:

X Party Congress of the SED

VIII Congress of GDR Teachers

XXXII anniversary of the formation of the GDR

XXII Olympic Games in Moscow

XXVI Congress of the CPSU ".

"Read this too," the author adds sarcastically:

CLXXII billion euros was the government debt of the GDR

XCVIII, IX percent voted in the 1989 local government elections for party and government candidates.

That is, in the very year in which the Berlin Wall fell and which was the last for this party and this government.

Education as a modern warfare

Luckily both parts of Germany reunited and ideologically loaded textbooks have become a history.

Russia represents a different case when after a short period of democratic reforms, the field of education has been transformed back into arena of misinformation or direct brainwashing. The authorities heavily intervene with the study of the history and politics of memory, based on the official social presumption of ideological monopoly, mechanisms of widespread domination censorship and administrative control over professional historiography.

Dissenting historians are harshly reprimanded and stubborn dissidents are fired from their jobs. Inevitably all these measures were reflected in history textbooks.

Restrictive legislation goes hand in hand with school manuals. For instance, on June 9, 2021 Russian lawmakers have adopted in the third and final reading a law that bans publicly denying the "decisive role of the Soviet people in the defeat of Nazi Germany or the humanitarian mission of the USSR in the liberation of the countries of Europe."[17]

This prohibition will apply to public speaking, works shown in public, as well as in the media and on the Internet. In addition, the State Duma adopted legislation that prohibits equating the "purposes, decisions, and actions" of the USSR with those of Nazi Germany and the European Axis powers.

At the same time, prohibitions can give rise to the opposite mythology: if they hide, then there is something to hide. Mythologization, unfortunately, will only be supported by such prohibitions. Only in the opposite direction. And in the end, instead of really exploring a complex social plot, we will play mythological and political games.

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[17] https://sozd.duma.gov.ru/bill/1166218-7
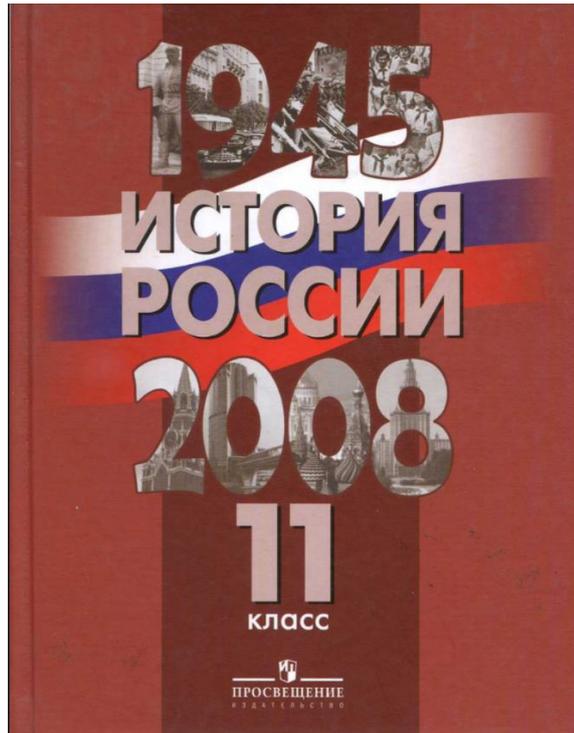
The first history textbooks for Russian schools revising totalitarian Soviet past in a positive way and glorifying Vladimir Putin's rule. © Prosveshcheniye editorial house.

Under such a cross-fire teaching history becomes a dangerous task. Please note that since July 2021 only vaccinated teachers can perform their work – with one and only Russian vaccine, of course – it openly violates the federal legislation on health, but in the situation of the "besieged fortress", authorities turn on double think. School teachers are forced also to join the ruling political party "United Russia" which encircles them in a totally prescribed way of delivering knowledge.

In Poland and Hungary the situation with teaching history is getting more complicated as well. Does it mean that in such conditions democratic standards have vanished? No, as John Dewey mentioned "…problems are the stimulus to thinking." Different pockets of freedom still exist, various methodic are still possible. And *critical* media literacy is one of the strongest and most effective ways to expose and combat misinformation within school education.

But, before we will talk about battling fake news within formal education, let's have a look at alternative sources of knowledge and examine the balance between fairness and profit.

Lost in translation – faked book about fake news

As has been discovered by the Russian independent media outlet Meduza, on June 21, 2019 the Russian publishing house "Sinbad" published the book "21 Lessons for the XXI Century" by the popular Israeli writer and historian Yuval Noah Harari. It is dedicated to the problems facing modern society. This is Harari's third book in the series. The first bestseller, Sapiens: A Brief History of Humanity, was published in 2011. It is dedicated to the past. The second, released in 2015, Homo Deus: A Brief History of Tomorrow, was an attempt to look into the future. In his new book, Harari, as he himself writes in the preface, decided to focus on what is happening here and now.

The book was published in the USA, Canada and a number of European countries in September-October 2018 and became a notable event; a review of her in The New York Times wrote Bill Gates.
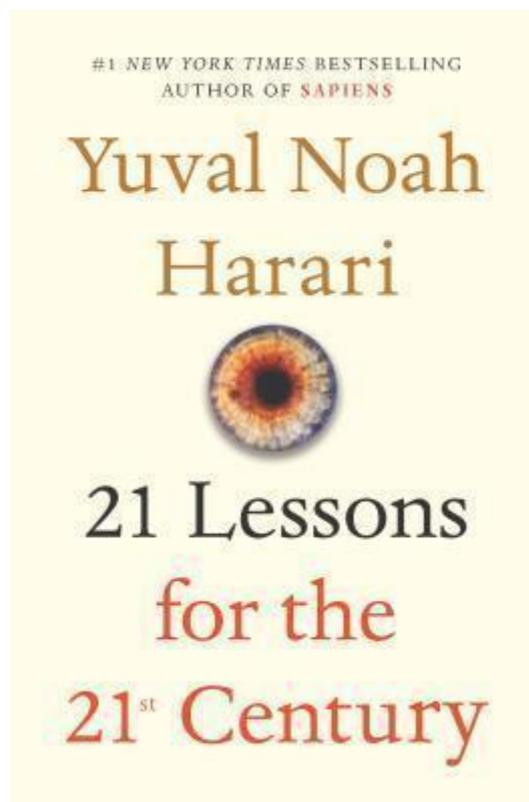
© Yuval Noah Harari; Vintage.

Shortly before the publication of the Russian translation, Sinbad shared fragments of the book with several publications. Among them was Meduza, which retells the chapter on raising children in the modern world (this was a

partner material). "Afisha" published a fragment of the 17th chapter of the book, which is called "Post-truth".

A few weeks after the publication of 21 Lessons for the 21st Century in Russia, readers drew attention to the discrepancies between the English and Russian versions of the book - first of all, in the chapter "Post-Truth". So, on July 16, a user of Live Journal under the nickname de_leser noticed that in the English version, as an example of fake news, the author cites statements by Vladimir Putin about the situation in Crimea in 2014. From the Russian version, the name of Putin and the mention of Crimea disappeared, and Donald Trump's speeches became an example of fake news. July 20 about it wrote on facebook Ukrainian user Andrey Chernikov, and 21 July - Russian publisher, critic and translator Dmitry Kuzmin. They published screenshots of the Russian and English versions of Harari's book.

17

POST-TRUTH

Some fake news lasts for ever

We are repeatedly told these days that we are living in a new and frightening era of 'post-truth', and that lies and fictions are all around us. Examples are not hard to come by. Thus in late February 2014 Russian special units bearing no army insignia invaded Ukraine and occupied key installations in Crimea. The Russian government and President Putin in person repeatedly denied that these were Russian troops, and described them as spontaneous 'self-defence groups' that may have acquired Russian-looking equipment from local shops.[1] As they voiced this rather preposterous claim, Putin and his aides knew perfectly well that they were lying.

Russian nationalists can excuse this lie by arguing that it served a higher truth. Russia was engaged in a just war, and if it is OK to kill for a just cause, surely it is also OK to lie? The higher cause that allegedly justified the invasion of Ukraine was the preservation of the sacred Russian nation. According to Russian national myths, Russia is a sacred

*The beginning of the chapter 17 in English edition about post-truth, where **V. Putin** is used as a negative example.*

17

ПОСТПРАВДА

НЕКОТОРЫЕ ФЕЙКОВЫЕ НОВОСТИ ЖИВУТ ВЕЧНО

Сегодня нам постоянно твердят, что мы живем в новую пугающую эпоху «постправды», окруженные ложью и вымыслом. Так, по подсчетам газеты Washington Post, за время после своей инаугурации президент Трамп сделал более 6000 ложных публичных заявлений. В речи, произнесенной в мае 2018 года, из 98 фактологических утверждений Трампа 76% были ошибочными, вводящими в заблуждение или ни на чем не основанными[1]. В ответ Трамп и его сторонники неизменно называют Washington Post, New York Times, CNN и другие средства массовой информации «лгунами» и обвиняют их в распространении «фейковых новостей» с целью дискредитировать президентство Трампа.

Истерика вокруг фейковых новостей явно раздута. В реальности она играет на руку тиранам и диктаторам. Если люди ничему не хотят верить, потому что «все новости — фейк», свободная и открытая публичная дискуссия становится невозможной. Поэтому мы должны напомнить себе, что сегодня наша ситуация ничуть не хуже, чем была раньше. Если мы живем в эпоху постправды, когда же у нас была счастливая эпоха правды? В 1980-х?

The beginning of the chapter 17 in Russian translation about post-truth, where **president Donald J. Trump** *is used as a negative example.*

What is written in the Russian version of "21 lessons for the XXI century"

In the version released by Sinbad, the Post-Truth chapter begins with a discussion of how people are persuaded that modern life is full of lies and fiction. "Thus, according to the estimates of The Washington Post, during the time that has passed since the inauguration, President Trump has made more than 6,000 false public statements," the text says. - In a speech given in May 2018, of Trump's 98 factual statements, 76% were erroneous, misleading, or unfounded. In response, Trump and his supporters have consistently called

journalists from The Washington Post, The New York Times, CNN and other media "liars" and accused them of spreading "fake news" in order to discredit the Trump presidency. "

But, according to the Russian text of Harari, the hysteria around fake news is inflated: "In reality, it plays into the hands of tyrants and dictators. If people don't want to believe anything because "all news is fake", free and open public discussion becomes impossible. Therefore, we must remind ourselves that today our situation is no worse than it was before. "

What is written in the versions of the book in other languages

The English version of the chapter "Post-truth" coincides with the Russian-language only the first sentence: "Today we are constantly told that we live in a frightening new era of" post-truth ", surrounded by lies and fiction." Further, as an example of fake news, Harari cites a completely different story - about how Vladimir Putin publicly denied the presence of the Russian military in Crimea in February 2014.

"The Russian government and President Putin personally have repeatedly denied that these were Russian troops and described them as spontaneously created 'self-defense groups' that could buy uniforms from local stores. When they made this rather ridiculous statement, Putin and his aides knew perfectly well that they were lying, "Harari wrote. Fragments of this chapter were given by editions OPEN Magazine and The Guardian.

Here, the author argues that "many Russian nationalists" consider the idea that "Ukrainians are a separate nation from Russia" to be a lie. And Ukrainian nationalists, in turn, consider the self-proclaimed DPR and LPR to be "fake countries".

Meduza compared the English-language version of Post-Truth to the German, French, and Hebrew editions of 21 Lessons for the 21st Century. All of them almost literally coincide with each other.

In the Russian edition, not only the chapter on "post-truth" was revised

Ukrainian blogger Andrey Chernikov found another fragment of the book "21 Lessons for the XXI Century" edited in the Russian edition. In Chapter 11, entitled "War," in the sub-chapter "A View from the Kremlin," the annexation of Crimea to Russia is called "the only successful invasion of the 21st century undertaken by a great power." The author writes that Russia itself "does not consider the annexation of Crimea to be an invasion of a foreign country," and notes that the Russian troops "practically did not meet with resistance either from the local population or from the Ukrainian army."

In the Ukrainian, English, German and French versions, there is no remark that Russia does not consider the annexation of Crimea to be an invasion of a foreign country. But it says that Russia "has instilled fear in the souls of its neighbors." And the success of the "conquest" is explained by the coincidence of circumstances - neither the local population nor the Ukrainian army offered resistance, and other countries of the world did not intervene in what was happening.

Yuval Harari said that he agreed to the changes in the Russian edition

Meduza sent questions to Sinbad about why the Russian version of 21 Lessons for the 21st Century differs from publications in other languages and whether these changes were agreed with the writer. Anastasia Khanina, a representative of the publishing house, promised to answer them after Sinbad talked to "Harari's office".

On the same day, a statement by the writer himself about the edits in the Russian version of the book [published](#)NEWSru.co.il website. "My goal is to ensure that the main messages of the book on the dangers of dictatorship, extremism and intolerance reach the widest possible audience," Harari said in a statement. - Including the audience living in countries with a non-democratic regime. Some of the examples in this book may alienate this audience or lead to censorship by a particular regime. For this reason, I occasionally admit adaptations of books and approve changes to certain examples - but never the main ideas of the work. "

As NEWSru.co.il emphasizes, representatives of Harari did not answer the question of who is the author of the fragments of the Russian version of the text that do not coincide with the original. However, the Russian-language fragment of Post-Truth is almost identical to the beginning of the column by Harari himself, which he in December 2018 [published](#)in the Opinions section of the popular Israeli website Ynet (this is the website of the Yediot Ahronot newspaper, one of the largest and most influential in the country). However, in this column, Harari also mentions Russia, calling the power in it "tyrannical" and recalling the accusations of spreading "fake news around the world" that sound against her. These fragments were not included in the book.

Fact-checking as a 22ⁿᵈ lesson for the XXI century

Dear reader, it is only for you to decide whether Mr. Harari cared more about his readers in authoritarian Russia or just about his book revenues, and, by the way, how ethical it was to make this kind of changes. We just wanted to draw your attention to the issues arising in the post-truth world and this example underlines once again that modern education needs to be rearmed with new tools of exposing attempts of manipulation.

Fact checking in its modern form is a variant of the journalist investigation, because, in fact, it has similar general structures touring elements, namely:

    (a) the object of investigation or research;

    (b) evidence base;

    (c) links to competent sources;

    (d) expert comments;

    (e) logical conclusion.

The main differences between the concept of fact-checking

In general, the fact checking has a number of original conceptual features that distinguish it from other forms of investigative journalism.

Main distinction act of a routine investigation there is a complete refusal, a fundamental non-use in evidence database of insider and unofficial information. To construct a study, the fact-checker journalist uses only official sources of information, both local and foreign, as well as answers to inquiries to government agencies and foreign institutions.

Comments and expert conclusions used in the proof base only if they are based on documentary evidence and data from open sources.

Conclusion or verdict has a clear formulation and criteria to avoid subjectivity and the use of value judgments. The usual version of the fact-check uses three verdicts -**"True", "by- lies "," lies "**...

Therefore, we can conclude that the structure and conceptual features specificity of fact-checking (in comparison with the classical form of investigation aimed at:

(a) maximum exclusion of subjective interpretation of- formations;

(b) prevention of manipulation of the evidence base;

(c) elimination of bias in the construction of the conclusion / verdict; - prevention of accusations of bias.

Fact checking – analytics of an accessible format

Open sources of information are the basic element for constructing evidence in accordance with the concept of fact-check.

Sources can be statistical resources of government agencies, professional expert platforms recognized in their field, international resources that have weight and high ting in the world. For example, the analytical information of the International lute fund.

This financial institution is one of the most powerful in the world. a political center that has been monitoring the economic and financial situation of most countries in the world for many years. Virtually no such international organization can compete with the volume and quality of data provided by IMF experts. Therefore, the conclusions of the specialists of the International Monetary Fund are an argument, a roadmap when making decisions by other international financial institutions, for example, World bank, the European Bank for Reconstruction and Development, etc.

The issue is that IMF and WB have been seriously criticized by various experts and human rights activists for advancing neo-liberal agenda, thus ignoring or silencing dissident opinions.

Since February 2020 **World Health Organization** (WHO) has become a target of severe and just criticism for manipulating with medical statistics and swift modifying of its recommendations related to COVID-19. Suspicious ties of WHO and ruling circles of People Republic of China do not add to the credibility of this (once?) important UN agency.

It is also a fairly reliable source of information for fact-checkers are responses to inquiries to government agencies and inter- international organizations.

However, due to the fact that all the mentioned sources are professional, the information received, as a rule, is presented in a specific form, has its own stylistic features and methods. would use.

At the same time, fact-check resources aimed at a wide readership. This means that the style of presentation of texts should be as accessible as possible for reproduction. acceptance. One of the important tasks of a journalist - fact-checker - is to "turn" specific, professional information into general information. step, transform analytics - into a product of mass consumption.

Actually why? Mostly persons whose statements are checked by fact-checkers, in their speeches, touch on topics that are acute for society. But at the same time, knowing the topic perfectly, they often skillfully present information in its own interpretation. And whether on their own ignorance domains, or vice versa, sometimes manipulate data and facts.

Thus, the formula of the final information product, looks like the following:

investigated statement

+

logical evidence

x

professional processing of professional information

=

accessible analytics format

One of the important tools that contributes to a better acceptance of analytical information by the reader is its visualization using tables, diagrams, maps, graphs, infographics, teaser graphics.

With the help of such elements, the following is achieved:

(a) diverse statistical information is published in systematized format;

(b) the reader has the opportunity to see the dynamics of the analysed processes

(c) temporary, quantitative, qualitative changes;

(d) the reader receives information about the connection at first glance not related data and facts, phenomena and events;

(e) greatly facilitated and simplified for perception with setting, comparison, ratio of various quantities and time- change intervals;

(f) phenomena, events, facts and data can be personalized, it gives the content sharpness and relevance.

However, each graph, table or diagram requires additional explanations. An explanation does not need to explain every aspect of the visual.

On the contrary - the reader's attention is focused on the most interesting sharp, relevant data and facts.

Contents of VACCINE AGAINST INFODEMIC fact-checking course

No.	The name of the discipline section (module)	Section Contents
1	Source of information. Source classification.	Source of information: functions in public space. Legal basis for working with a source of information: the right to access information. Legal restrictions on access to information. Request for information: opportunities for obtaining, order of refusal or deferral. Typological characteristics of sources of political information. Institutions, political actors, documentary sources. Source of facts and source of opinions. Trust in the source of information.
2	The subject of the political process as a	Newsmaker, his tasks and functions in the public space. Characteristics of key newsmakers. Classification criteria: source status, publicity, accessibility, positioning,

		competence.
	source of information.	Formation of the newsmaker corps. Selection criteria. Types of newsmakers in the Project country public space. Motives for interaction between journalists and newsmakers. Peculiarities of journalists' interaction with newsmakers of different levels. Finding a compromise and pressure. Ethics of interaction with sources of information. Main risk areas. The problem of relationships with sources. Conflict of interest. The problem of self-censorship. Coordination of information.
3	Practices of interacting with the source: access to the newsmaker.	The place of the press service in the functioning of the system of relations with the media. Forms and methods of interaction. The press secretary as a key figure in the communication process. Special events for the media: press conferences, statements, briefings, press tours. Screening tools for journalists: accreditation institute, pool, briefings "for insiders". Accreditation procedure and grounds for its deprivation. Features of the work of the journalistic pool.
4	Practices of interaction with a source: types of interaction between a journalist and a newsmaker.	Formal and open interaction. Press release, "parquet" interviews and "simultaneous exclusive". Hidden interaction: comment "under the source", comment "without data", "journalist hides his profession." Anonymous source. Classification of anonymous sources. The motives of anonymity. Anonymous source of information vs anonymous source of opinions. Devaluation of the link to the source.
5	Experts. Features of the "thought factories" activity.	Characteristics of experts: main functions. Features of the activities of public experts. Role statuses of experts: analyst, mythologist, newsmaker, media expert. Forms of interaction with the media. Selection criteria for experts. Public rating, recognition and recognition in the media vs reputation and

		scientific authority. "Thought factories": main types. World experience and Project country practices. Problems of public expertise: narrowing the circle of experts, their commitment, low quality of expertise. Experts and political lobbyism.
6	Source interaction practices: manipulation techniques.	Methods for promoting the interests of political subjects. The main methods of political manipulation are: organized information leakage, "secret source", "oversight" tactics, uncertainty, "fogging", big lies and "crumbs" tactics. The source of information as the initiator of the topic. Organized information leakage ("drain"): characteristics and objectives.
7	Fact checking.	The credibility of the sources. Verification of the source and information. Fact vs factoid. Checking quotes. Search for the original source. Search for the opposite position. Recognition of fakes.
8	Data as a source of information. Working with databases.	Data quality. Press release, statistics, databases. Data journalism. Open data and their criteria. Information search engines. Official open data portals (international, federal and regional). Portals of civic activists. Data disclosure culture. Data visualization. Toolkit for Investigative Journalism. Data fixation. Data cleaning and systematization. Information verification methods. Analysis and interpretation of the data obtained. False correlations.
9	Working with historical sources.	The specifics of working with historical sources. Types of sources. Methodology for working with historical sources. Criticism of sources.

10	Specificity of work in archives and libraries.	The structure and topics of the archival funds of the Project country Federation. Leading archives. Availability of archived data. Permission to access the archive. Specificity of working with documents in the archive: information search, note-taking, sampling, etc. Time frames of work. Technical aspects of work: microfilm, computer use, photography, ordering scans and photocopies. Library funds. The specificity and importance of correlation with archives.
11	Blogs and social networks as a source of information.	Specificity of information. Main risks. Source reliability problem. Technologies of journalist working with social networks. Information selection and verification mechanisms. Stratification and breeding. Building links.
12	Mass media as a source of information.	Monitoring of the media field. Working with news feeds. Selection of messages: selection criteria. Analytical materials as a source of information. Expert journalist. The transformation of an analytical journalist into an expert commentator.

Recommended educational technologies

The main types of training for students in the framework of the discipline "VACCINE AGAINST INFODEMIC" are lectures and seminars, as well as students' independent work. In the learning process, it is expected to actively use interactive formats for conducting classes (simulation trainings, role-playing games, case studies, participation in group discussions).

Examples of role-playing games:

(a) "playing the press service", during which students "turn" into a political newsmaker with information, his press secretary, shielding the

newsmaker from journalists, a PR officer trying to show the newsmaker in a favorable light, and a journalist;

(b) "election game", during which students become candidates for deputies / governors / presidents, press and PR-services employees, consultants of the opposing headquarters, civic activists, "trolls", "spoilers" and journalists.

The aim of the games is to develop, through modeling, the skills of professional behavior of a journalist with sources of information: from dress code and restaurant bill to sighting of the text.

Educational and methodological support of independent work of students. Evaluation tools for ongoing monitoring of progress, intermediate certification based on the results of mastering the discipline

The main forms of independent work of students are the study of educational, methodological and scientific literature (the list is given in the corresponding section of the discipline program), monitoring of Project country and world media, as well as the implementation of independent work that is offered by the teacher for classroom and extracurricular performance.

The current control over progress is carried out in the form of an assessment of work in seminars, an assessment of independent homework, as well as an assessment of intermediate tests.

Possible scenarios for the workshop:

(a) Assessment of the frequency of appearance of experts in the media. It is planned to monitor the Project country press in order to identify frequently appearing experts (as cited specialists or authors of materials) and determine their role statuses.

(b) Evaluation of the proposed sources of information on a specific topic for their reliability with the subsequent preparation of the text. The goal is to understand a large amount of information, evaluate it, process and analyze it.

(c) Fact checking the proposed journalistic text.

(d) Tracking information on the selected topic in the media from sources that do not position themselves as political, but in fact act as such, since they supply content (for example, the topic of "combating corruption" suggests that the Investigative committee, prosecutors, etc.). The goal is to track possible "branches" and "switching" of the topic.

(e) Search for information on the proposed topic in databases.

Options for questions for certification:

1. Participants in the political process as sources of information: classification. Classification signs.

2. Organized information leakage: characteristics and objectives.

3. Public institutions as sources of information.

4. Work of a journalist in archives: the specifics of information retrieval.

5. Qualitative characteristics of the political elite. Interest groups as a source of information.

6. Features of the work of the journalistic pool.

7. Experts: features of the activities of public experts. Role statuses of experts.

8. Mass media as a source of information. Working with news feeds.

9. Experts and political lobbyism.

10. Systematization and methods of verification of the information received.

11. Social groups as a source of information.

12. Forms of interaction of experts with the media. Selection criteria for experts.

13. "Think tanks": the main types. World experience and Project country practice.

14. Types of sources: official / unofficial, open / anonymous, expert and insider. The main risks of interaction.

15. Newsmaker, his tasks and functions in the public space.

16. Press service as a source of information. Work specifics.

17. Practices of interaction with the source: the basic techniques of manipulation.

18. Formation of the newsmaker corps: reliability and reputation of sources. Assessment of the "weight" of the newsmaker.

19. Problems of relations between a journalist and sources of information. Main risk areas.

20. Data journalism: filtering the data stream.

21. Intellectual discourse: the problem of sources. Representation of various intellectual groups in public space.

22. Socio-psychological characteristics of newsmakers: publicity and positionality.

23. Practice of interaction and source: access to the newsmaker. Screening tools for journalists.

24. Databases as a source of information. The specifics of a journalist's work.

Task for assessing the competence of VACCINE AGAINST INFODEMIC

Exercise 1.

Case task

Prerequisite: you are the editor of a news feed of a multimedia portal of one of the project country television channels/radio stations/websites/Telegram channel.

1. Fact check the news provided by the teacher.

Imagine a situation that you come across news in the social media feed among your friends' posts. Your task is to fact-check the news. The news is strange, which will attract the attention of the audience, but questionable from the point of view of reliability.

The news is given by the teacher in class.

Objective: to decide whether your publication can publish this news and, if so, on what conditions.

2. Find dubious news on the Internet yourself and carry out a similar fact-checking procedure for it.

Essay.

Write an analytical essay on "Television on the Net: Advantages and Disadvantages in 2021". Analyze the resources that position themselves as Internet TV. Compare 3-4 TV Portals

Task 2.

Essay.

Write an analytical essay on the topic "Radio on the Internet: Current Trends." To do this, compare the work of 3-4 radio stations on the Web. Pay attention to regional stations.

Task 3.

Essay.

Write an essay on the topic "Modern Forms of Restricting the Dissemination of Information: before and after COVID-19" Pay attention to the following aspects:

(a) What are the forms of restricting the dissemination of information?

(b) What are they caused by (legislation, editorial policy, self-censorship, traditions, politics and the mechanism of social networks)?

(c) What can be considered self-censorship?

(d) Is it self-censorship as a means of self-regulation of the journalistic community or a means of manipulating journalists?

(e) What could be the consequences of tightening restrictions on the dissemination of information, as well as the lifting of any restrictions?

(f) How do social networks restrict and regulate information flows?

(g) How does this regulation affect users as well as media brands?

(h) Imagine how the process of regulating information flows will develop in the next 5 years and who will determine it.

(i) What has changed after coronavirus pandemic outbreak in 2020?

(j) Has the situation worsened in 2021 in comparison with the previous year?

Typical control tasks or other materials necessary to assess the planned learning outcomes in the discipline, characterizing the stages of the formation of competencies in the process of mastering the educational program

ACTIVITIES FOR PRACTICAL EXERCISES

List of tasks

Task number 1: Analyze the proposed cases and, using search engines, determine what the material belongs to:
 	
    (a) fact
    (b) factoid
    (c) "hit piece"
    (d) fake
 	
The task is carried out in writing individually. The results are discussed in the group.
 	
Task number 2: Working with the case. The student is offered the role of the editor of the television news service. S/he needs to read 5 news items in 50 minutes and correct mistakes in them. The task is carried out in writing individually. The results are then discussed in the group.
 	
Task number 3: Working with the case. Check the official message / statement of the official for the content of lies, half-truths, omissions in it. The assignment is completed in writing, then discussed in the group.
 	
Task number 4: The game "Analyze it!" Students are divided into four teams (optional). Each team presents examples of the case prepared for the game in turn. The task of the rest is to determine the fact, factoid, fake. Voting is carried out with multi-colored stickers (optional). After all materials have been submitted, the results are calculated. The best team receives the title of "Semester Critics", an excellent mark for completing the assignment and bonuses for passing the test.
 	
Task number 5:
Working with social networks.
 	
    (a) Using special services (WebMii, Pipl FindFace etc.) find a person's contact information, find a person by photograph.

(b) Guided by a special algorithm, analyze the user activity of the page in social networks.

Task number 6:

Photo verification and work with metadata.

Students are offered several photos and solve a number of problems:

(a) determine if the photo is related to the message text;
(b) find the original source of the appearance of the image;
(c) to determine whether there was interference by graphic editors in the original image of the snapshot.

TASKS FOR INDEPENDENT WORK

List of tasks
(a) Prepare examples for the Analyze It! Game. It is necessary to collect a case consisting of actually accurate materials and fakes.
(b) Create a 10-question quiz on Playbuzz, asking the audience to guess what is true and what is fake. The student carries out the search for material for the quiz independently.

TASKS FOR CREDIT

List of questions
1. Concept fact-checking.
2. Fact, factoid and fake.
3. Varieties fact-checking
4. Information Products fact-checking
5. Fact checking public statements and official information
6. Evidence building and methods of evidence in fact-checking

7.	Fact checking scientific information
8.	Error classification
9.	Ways to prevent errors and responsibility
10.	Information sources
11.	Typical scan objects
12.	Rules of fact-checking
13.	Sources of Finding the Right Data
14.	Internet source verification algorithm
15.	Rules for checking profiles on social networks
16.	Photo verification
17.	Working with metadata
18.	Video verification
19.	Screen manipulation methods
20.	Common problems fact-checking

Practical task for credit: pass a quiz test to determine a fake (quizzes are prepared by students during their independent work, a student passes a test prepared by a classmate)

Methodological materials defining procedures for assessing knowledge, abilities, skills and (or) experience of activities, characterizing the stages of the formation of competencies

Tasks for practical work are evaluated based on the requirements noted above. Answers are presented in written and electronic forms, in the form of web links directly to practical exercises, which should be held in a computer class with Internet access; in case of missing a lesson for a good reason, the answer is provided in electronic form.

Self-study assignment is estimated based on the requirements noted above. Answers are presented in the form of a web link to a test quiz created on the Playbuzz service.

SCENARIO[18] OF THE TACTICAL GAME ON FAKE NEWS FOR STUDENTS
"ONE QR, ONE HERD, ONE CAGE!"

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For the purpose of this manual Namoi has elaborated a tactical game based on real events and reflecting the problem of pandemic, fake news and civil society.

In 2020, several countries announced the development of coronavirus vaccines. Gu-la land, one of the countries with an authoritarian regime, decided to turn its Satellite - III vaccine into a foreign policy showcase of its "brilliant achievements", despite the fact that this medicine has not passed all

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[18] A subject for creative add-ons, additions and any other kind of changes depending on the target group, age, context etc.

stages of clinical trials and that in June 2021 the EU field team has found the conditions of manufacturing this vaccine simply inappropriate.

Notwithstanding the massive propaganda of this vaccine and the really high mortality rate from COVID-19, most of the Gu-la land population does not believe in its therapeutic effect and wants to be vaccinated with foreign vaccines, such as Zephyr, StarAurelius or Boris&Boris. The Gu-la land authorities, under threat of dismissal, demand that military and law-enforcement personnel, public transport, medical and educational workers, school and university students be vaccinated with Satellite – III only and as soon as possible.

The vaccinated victims should always carry their certificate only in digital form [QR-code] and present them upon request. Children and pregnant women are on the forced vaccination list as well.

The vaccine has, inter alia, the following problems:

(a) It barely passed the first clinical trial.

(b) The certificate was obtained from a corrupted government.

(c) The use of this vaccine causes serious side effects, including death.

(d) The vaccine is extremely dangerous for the elderly, but it is they who most often get the coronavirus.

(e) The vaccine requires a strict temperature regime, but in the conditions of the destroyed Gu-la land medicine, it cannot be observed.

(f) This vaccine must be injected to the patient twice with a break of a month.

(g) You have a competitor in the country – another laboratory that has developed a truly effective vaccine, but it does not have a lobby in the ruling regime, and people have already learned about the new vaccine.

In addition, more effective vaccines have been developed in other countries.

In July 2021, the Gu-la land government decided to coordinate all its forces to produce fake news in order for the population to believe in the power of this vaccine. There are five interest groups in the country, some of which seek to force the population to vaccinate, and some want to expose the wave of false news.

Representatives of all 5 groups are invited to an international vaccine debate in a neutral country, where they can present their positions before experts and journalists from different countries.

If representatives of civil society and independent media are dissatisfied with the arguments of their opponents, then after completion they will prepare a complaint to the ECHR referring to Article 2 (right to life), Article 3 (prohibition of inhuman and degrading treatment), Article 8 (right to respect for private and family life) and Article 10 (the right to freedom of expression) of the European Convention, the applicants will accuse the state authorities of Gu-la land for failing to fulfill their obligations to protect the life and physical integrity of citizens.

Before this, groups can formally or informally negotiate with each other, join tactical coalitions, and speak with a joint opinion. Debate moderators are not part of any of the groups.

Each group must edit a minimum of one video, create one text and one exposure of false news or "exposure" of real but unwanted news. It is advisable to create a general group in the messenger which in turn will be used as a laboratory and battlefield of fake news.

Role cards in the game

I.	**Big pharma**

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It is in the interests of your laboratory and group of companies to establish production and distribution of Satellite - III. This will convince foreign countries of the effectiveness of your drug and generate huge profits. However, you do not have the necessary virological expertise, and none of your laboratories have previously worked on antiviral drugs or appropriate diagnostic methods. You understand that consumer interest is greatest when the first outbreak occurs, but after the first wave subsides, their interest decreases accordingly, as does the investment. This means that often your medical technologies will be marginalized simply because no one wants to spend money on them. The urgency of marketing the vaccine comes with other risks to you,

Therefore, your task is to use all kinds of media and administrative technologies to promote your vaccine, drown a competitor, and promote your vaccine in foreign countries.

Some hints:

(a) Use different types of false news feed for different audiences.

(b) Try to use complex pharmacological terminology to confuse doubters.

(c) Run rumors about the inevitability of illness in the absence of vaccinations (develop several types of rumors and think about an audience for each).

(d) Organize false scientific publications to support your vaccine.

II.   Government (ruling regime)

© Deutsche Welle

Your tasks coincide with the goals of Big Pharma, especially since they will have to give half of their profits to you. But you must take into account the unpopularity of your regime, the impoverishment of the population and the development of mass rejection of the new vaccine. Your state media (TV and radio) operate according to outdated methods and are a trusted source of information only for the elderly or submissive people from remote rural areas. Young people are reluctant to get vaccinated and actively resist Satellite - III propaganda. You understand that the vaccine is in many ways a symbol of the regime and the refusal to be vaccinated is a challenge to the rule of the same

group for many years. You urgently need to re-strategize your media policy and align all elements of the propaganda machine to be successful.

Some hints:

(a) Try to block independent media through pocket courts.

(b) Pass laws on blocking objectionable information under the pretext of fighting panic (the group should write a short bill)[19] through the pocket parliament.

(c) Use the *Gu-la land Today* international TV resource to promote your vaccine in foreign countries.

(d) Promise social support to the population if a high vaccination rate can be achieved.

(e) Try to outbid or discredit independent experts.

(f) Constantly inflate rumors of foreign interference in the internal affairs of Gu-la land and rely on a sense of patriotism.

(g) Use provocateurs among the opposition and independent media.

(h) Threaten to stop access to the shops, public transportation, travelling abroad for non-vaccinated citizens.

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[19] Article 207.1. of the Gu-la land Penal Code: "***Public dissemination of knowingly false information about circumstances that pose a threat to the life and safety of citizens***"

Public dissemination under the guise of reliable messages of knowingly false information about circumstances that pose a threat to the life and safety of citizens, and (or) about measures taken to ensure the safety of the population and territories, methods and methods of protection from these circumstances – s hall be punishable by compulsory works for a term of up to three hundred and sixty hours, or corrective labor for a term of up to one year, or restriction of freedom for up to three years.

Note. In this article, circumstances posing a threat to the life and safety of citizens are recognized as natural and man-made emergencies, environmental emergencies, including epidemics, epizootics and other circumstances resulting from accidents, dangerous natural phenomena, catastrophes, natural and other disasters, entailing (which may entail) human casualties, damage to human health and the environment, significant material losses and disruption of the living conditions of the population.

This totally abstract formula allows to imprison unlimited numbers of citizens who just (re)posted one comment in the social media.

III.   Dependent media (*Governmental propagandist industry*)

© YouTube

Formally, you are independent from the state, in fact, the ruling regime decides everything or almost everything for you. You are embedded in the state propaganda and agitation system. We can say that you are in the direct service of the state, which uses the media as instruments of direct influence on society. The state broadcasts through this channel its will, its attitudes, its understanding of the current events, which it itself often inspired. Of course, this is a one-way channel of influence: from top to bottom.

In recent years, you have infiltrated YouTube, TikTok and Cablegram channels, but your broadcast format remains the same – lagging behind trends and aimed at age groups. Therefore, television remains the main weapon for promoting Satellite - III. The average residents of Gu-la land have a hard time with foreign languages, so they rely mainly on information in their native language, which narrows their possibilities, but expands yours - in particular in the manipulation of foreign news. In your environment, favoritism and informal connections play a decisive role, instead of talent and competence.

Some hints:

(a) Consider attracting celebrities.

(b) Use shocking content and emotional escalation even more (think of several options and try to act out them).

(c) Permit controlled "classified information leaks" from time to time to encourage the population to vaccinate.

(d) Distort information about foreign vaccines to discredit them.

(e) Use bogus "experts and specialists" on talk shows.

(f) Use data from fabricated opinion polls and statistics.

(g) Fabricate "independent" private media that will scold the authorities, but praise the vaccine.

IV.	**Independent media**

© OVD-Info

In Gu-la land, newspapers and online publications enjoy somewhat more freedom than television. Old Gazette and the radio station Echo of Novgorod (despite the fact that its owner is a raw materials concern close to the regime) remain the only known mass media of the classical type that can still afford a critical position in relation to the authorities and remain open to opposition statements.

Online journalism is less subject to state control, but even here the pressure from the authorities is growing from year to year. For example, in recent years, a number of critical sites have been blocked, in most cases under the pretext that materials of an allegedly extremist nature were published on them. However, blocking, as a rule, can be bypassed - in this way readers still have access to the content of the media in respect of which this practice was applied. In general, the current situation leads to the fact that most of the independent media can be found on the Internet. More or less open discussion

of current topics is also conducted in blogs, instant messengers and social networks. However, in this area, the state is beginning to 'tighten the screws' under the pretext of fighting 'fake messages' and extremist statements or hiding behind the need to protect the feelings of believers and the dignity of representatives of the state. The exorbitant punishments imposed on these charges often put people on the brink of ruin or arrest.

In such a harsh environment, you will have to confront the entire machine of state propaganda and repression to tell the truth about Satellite - III.

Some hints:

(a) Many independent media are in conflict with each other over political differences.

(b) You are often dependent on donations and donations have become irregular due to Covid-19.

(c) Some independent media make deals with the authorities (discuss this as a major ethical dilemma).

(d) Your audience is mainly young and adult people living in cities and large cities.

(e) More and more relevant information can be found only in one messenger Cablegram.

(f) Your audience usually speaks English and this can help fight false news.

V.   Civil society (young activists)

Image from a public domain

Since May 2012, the Gu-la land government has passed a series of restrictive laws, including so-called "alien promoters", launched a nationwide campaign to screen nongovernmental organizations, harass, intimidate and, in some cases, imprison political activists while labeling government critics as secret enemies. In 2020 and 2021, new laws and government harassment are pushing civic activists to the brink of law.

Some laws are directly aimed at limiting or even excluding independent public activity through draconian restrictions on foreign NGO membership and the use of foreign funding by organizations.

The regulation of Internet content in the Gu-la land segment of the Web has been tightened through various laws and simplified methods of adding sites or individual pages to "black lists".

Peaceful protests have been accompanied by excessive use of force by police officers and illegal arrests. The campaign is unprecedented in its scope and scale, and is clearly aimed at intimidating and marginalizing civil society,

as well as suppressing any dissent. The brightest critics of the regime were expelled from the country or sent to prison.

All this testifies to the beginning of the "witch hunt".

Some hints:

(a) There are many activists among you who can expose false news about the Satellite - III vaccine and explain it convincingly (try to have each member of the group play the role of one or another expert).

(b) You work with independent media.

(c) Many of you run your own blogs or Cablegram channels that are popular.

(d) A number of activists have ceased their activities due to government repression.

(e) You have established contacts with foreign activists and independent experts.

(f) You suspect that your electronic communications are under the tacit control of the regime.

Tasks and timeline

Image from a public domain

(a) Analyzing of group assignment, reading time, strategy consultations among the members of the same group[20]: – 20 – 30 min[21];

(b) Preparing the fake news related to promotion of the vaccine[22] (three groups) and elaborating mechanisms of revealing of these fake news (two groups) – 30 – 45 min;

(c) Informal negotiations [group *to* group][23] – 20 – 30 min;

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[20] It is important to listen to the dissent voice(s) within your group, if there will be any.

[21] Time limit is recommended but optional.

[22] For this purpose, you can organize group assignments one day before in order to give participants enough time to prepare convincing videos/articles etc. During phase "**b**" these materials have to circulate in the messenger.

[23] Please take notes on the way and stereotypes of communication, e.g.: polite or aggressive, diplomatic or straightforward, win-win or zero-sum approach.

(d) Moderated roundtable public discussion [group representatives][24] – 30 – 45 min;

(e) Analyzing of the outcomes [*within* groups] – 20 – 30 min;

(f) Final statements of the representatives – 5 – 10 min;

(g) *Moderators* announce the decision with detailed arguments – 3 – 5 min;

Option I	**Option II**
Litigation	**No need for the litigation**
[1] Both sides are very dissatisfied with the results.	**[1]** Both sides have found a common solution for the vaccination problems.
[2] Independent media and Civil society representatives make a public statement for on the start of a litigation campaign in the ECHR – 2 – 3 min. <u>Game over</u> and we move to para. (**i**).	**[2]** Both sides will draft the *Vaccination Joint Agreement* with a mechanism of implementation. We move to para. (**h**).

(a) Drafting of the *Vaccination Joint Agreement* [1 page], establishing division of roles [20 – 30 min];

(b) Debriefing.

The main actors: game check-list

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[24] I highly encourage the demonstration of documentaries/mockumentaries, statistical data, opinion polls etc. related to fake news.

N	Group	Image	Expectations, observations, arguments, connections
I	**Big pharma**		
II	**Government**		
III	**Dependent media**		
IV	**Independent media**		
V	**Civil society**		

Authentication list (for all five groups)

Tactical game: Vaccination Dilemma				Group name: _____			
N	**Real** **identity**	**Game** **identity**					
	Participants name	**New** name	Occupation	Social status	Gender	Age	Political affiliation	Notes
I.								
II.								
III.								
IV.								
V.								
VI.								
VII.								

Wild cards (for educator's only!)

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Sudden news and / or facts that can be used by the game organizers to dramatize the setting and / or complicate tasks if a strong group of participants is working. This usually happens in the middle of the game.

Examples:

(a) Internal correspondence of vaccine developers has leaked to the Internet, where serious errors in testing are mentioned.

(b) WHO has announced that it considers Satellite - III dangerous to use.

(c) Independent research has confirmed the need for mandatory vaccination of the elderly in Gu-la land.

(d) A number of foreign governments have agreed to purchase Satellite - III consignments.

(e) A number of foreign governments who agreed to purchase Satellite – III have decided to send back this vaccine.

(f) A well-known critic of the vaccine was poisoned with a toxic nerve agent and was urgently brought to Switzerland for recovery.

(g) A famous medical journal *Scalpel* has published two articles praising Satellite – III.

(h) Your suggestion(s).

School gamification against fake news and educator's personality

The individual development of a strategy for gamification is influenced by the teacher's lifestyle (heuristically saturated or impoverished), the adequacy of the idea of the world around, the study of scientific and pedagogical periodicals, modern scientific and special literature, as well as the body of dissertation research; the ability to build trusting relationships with students, find, generalize and analyze information, constructively resolve or prevent conflicts.

The existential adulthood of a teacher is rarely mentioned and un-reflected in the educational environment, but a prerequisite for a high level of strategic thinking, which will allow correcting and guiding the development of the process by advanced qualifications. The existential delay in growing up manifests itself, among other things, in a low culture of decision-making, repetition of one-dimensional pedagogical schemes, and adherence to the reactive description of events model.

In addition to deep knowledge and work experience, teachers need critical thinking, a high level of self-organization, a broad outlook, leadership qualities, a sense of responsibility and creativity. But perhaps the most important among all the necessary components should be the realization that a professional teacher is not a static title, but an intense process that requires regular renewal and progressive complication of cognitive and practical activity.

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8. Countable. 5 ways to beat confirmation bias

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12. Skillshare. How technology destroyed the truth

13. Crash courses on media literacy: Media and the Mind and Influence and Persuasion

14. The miseducation of Dylann Roof

Jeremy Bishop on Unsplash

LEADING ON SCHOOL-POLICY-DEVELOPMENT AND ACTION PLANNING

5o GYMNASIO VOLOU

VOLOS GREECE
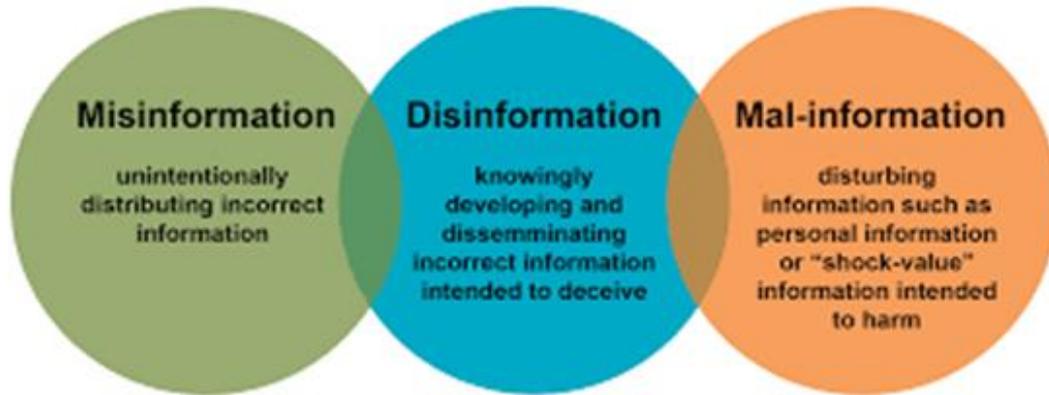
INTRODUCTION

Disseminating false or biased information, from genuinely false rumors to outright lies, is nothing new.

After all, incidents of disinformation are documented as far back as ancient Rome. However, the advent and democratization of digital technologies have opened new avenues for this phenomenon, to the extent that the term "fake news" was the word of the year for 2017 in the Collins Dictionary.
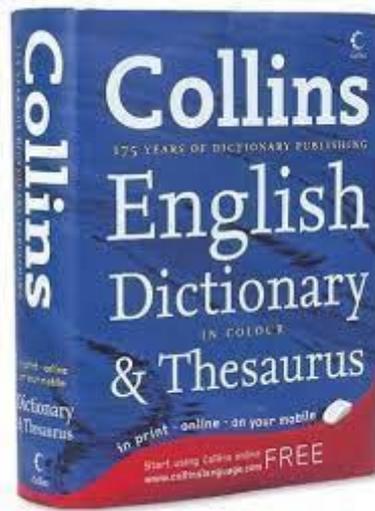
In fact, the trend does not end here: since the outbreak of the COVID-19 pandemic, online disinformation, whether intentional or not, (especially with regard to public health issues) has become a social and political issue of paramount importance and many official institutions - such as The European Commission, the United Nations, and even the Pope - are issuing statements and directives to address the spread of what the World Health Organization (WHO) has called the "information epidemic" (infodemic).

Leading up to the 2016 U.S. presidential election, social media was awash with identifiable fake news, yet little or nothing has been done to combat the problem because Facebook, Twitter, and other major web media firms are considered platforms or utilities rather than media. In particular, older Facebook users are a major source of fake news proliferation. The journal Science Advances recently reported that people over age 65 are the most likely source of fake news stories circulating on Facebook, regardless of their political affiliation..

According to a research which has done in U.S.A at 2016, while the "vast majority of Facebook users did not share any articles from fake news domains in 2016 at all," the disinformation that does get shared has a negative impact on susceptible individuals (particularly the elderly), as well as on communities and the nation as a whole. Efforts to improve digital media literacy that at present tend to focus on students and young people need to be extended to reach older social-media users.
(https://onlinedegrees.und.edu/masters-cyber-security/tips-for-students-on-how-to-identify-fake-news/)

To address the above worrying trends, various actors have developed a number of initiatives. Journalists and media experts have launched rapid scrutiny services, while politicians around the world are working to draft anti-

misinformation legislation and online platforms are strengthening their policies to combat the spread of deliberate and non-misinformation (see, for example, Twitter and Facebook). Although commendable, they all pose the same problem: they are easily challenged by critics who claim that it is an attempt to restrict freedom of expression. (https://www.etwinning.net/el/pub/etwinning-plus/highlights/simple-ways-to-address-disinfo.htm)

Spurred by the rise of so-called "fake news" and its impact on elections, a Santa Barbara state senator has introduced a bill that would encourage California's K-12 schools to teach students to be skeptical, informed news consumers.

Hannah-Beth Jackson (D-Santa Barbara), SB 203, known as the digital citizenship and media literacy bill, would require the state superintendent of public instruction to convene a committee of educators, librarians, parents,

students and media experts to draw up guidelines on how best to recognize fake news.

Popularized in the 2016 presidential election, the term "fake news" refers to Internet hoaxes or intentionally fabricated stories presented as news and intended to sway public opinion. Cyber bullying, privacy, copyright infringement, digital footprints, sexting and general Internet safety would also be included in the guidelines. The guidelines would be brief and could be taught at all grade levels, in any subject, although high-school government, history, English and journalism classes would be the most likely venues.

It's easy to see why fake news is a problem, but it's harder to identify it and prevent it from spreading. Many social media users, including journalists and politicians, are aware of problems regarding fake news, yet they unknowingly give it credence by sharing misleading, incorrect, and downright fabricated "news" on Facebook, Twitter, and other platforms. (https://edsource.org/2017/bill-would-help-california-schools-teach-about-fake-news-media-literacy/582363)

Students and disinformation

Disinformation on social media spreads farther, faster, deeper and more broadly than truthful information and is often among the most popular social media posts.(Vosoughi, Soroush, Deb Roy and Sinan Aral, 'The Spread of True and False News Online', Science 359(6380): 1146–51, March 2018. https://doi.org/10.1126/science.aap9559 / Silverman, Craig, 'This Analysis Shows How Viral Fake Election News Stories Outperformed Real News on Facebook', Buzzfeed News, 2016.

www.buzzfeednews.com/article/craigsilverman/viral-fake-election-newsoutperformed-real-news-on-facebook21,22)

In 2014, the World Economic Forum identified the rapid spread of digital disinformation as one of the top ten perils to society. This rapid spread is not surprising, given the vast number of people who use the internet – just over half of the world's population and over 69 per cent of those aged 15–24 – to communicate, socialize, and consume and share information.(World Economic Forum, 'Top 10 trends of 2014: 10. The Rapid Spread of Misinformation Online', Outlook on the Global Agenda 2014 (blog), 2014. http://wef.ch/GJAfq6)

One possible reason is that emotionally charged content – such as that which surprises, outrages or angers – spreads more widely and more rapidly among people than regular content. A study of Twitter communications about three polarizing issues showed that the presence of moral–emotional words in messages increased their diffusion by a factor of 20 per cent for each additional word.(Brady, William J., Julian A. Wills, John T. Jost, Joshua A.Tucker and Jay J. Van Bavel, 'Emotion Shapes the Diffusion of Moralized Content in Social Networks', Proceedings of the National Academy of Sciences, 2017. www.pnas.org/content/114/28/731323)

Children are frequent users of the internet: they "value technology as a way to research the issues their communities face, to be informed about events and issues, to gather data, and to share views and experiences with others". (Livingstone, Kardefelt Winther and Saeed, Global Kids Online Comparative Report / Third, A., D. Conrad, L. Moody and K. McDonald, Digital Media and Adolescent Engagement for Social and Behavioural Change: A rapid evidence review, UNICEF and Western Sydney University, 2020).

Many find themselves more attuned to social media and the online world than their parents, caregiver and educators, and are both comfortable with this world and curious about it (Ofcom, Children and Parents: Media Use and Attitudes Report 2019, Ofcom, London, 2020. www.ofcom.org.uk/research-and-data/media-literacy-research/childrens/children-and-parents-media-use-and-attitudes-report-201932

With increased digital use comes increased exposure to disinformation: in one 2020 study, 76 per cent of 14–24-year-olds reported seeing online disinformation at least once a week, a rise of 50 per cent on the previous two years.(Vodafone Foundation Germany, 'Studie Zu Desinformation in Der Coronakrise: Mehr Junge Menschen Regelmäßig Mit Falschnachrichten Konfrontiert', December 2020

www.vodafone-stiftung.de/desinformation-jugend-coronakrise/).

Children may be particularly vulnerable to disinformation because their maturity and cognitive capacities are still evolving, including the development of "different psychological and physiological motivations, and with them, different rights and protections". (Bhabha, Jacqueline, 'The Child: What Sort of Human?', Publications of the Modern Language Association of America 121(5): 1526–35, 2006).

A UNICEF survey in 10 countries points to shortcomings in how young people evaluate online information: up to three-quarters of children reported feeling unable to judge the veracity of the information they encounter online.

(Livingstone, Kardefelt Winther and Saeed, Global Kids Online Comparative Report.)

This was especially true among young children. However, depending on the country, relatively large proportions of older children self-reported high critical evaluation skills

Children are active users of online resources, but they do not always have the cognitive and emotional capacity to distinguish between reliable and unreliable information. As a result, not only can they be harmed by disinformation, but may also spread it among their peers. Children can be targets and objects of disinformation, but they can also challenge and debunk misinformation. Children encountering disinformation (UNICEF-Global-Insight-Digital-Mis-Disinformation-and-Children-2021.pdf)

[Countries in the survey are Albania, Brazil, Bulgaria, Chile, Ghana, Montenegro, New Zealand, the Philippines, South Africa and Uruguay. (Source: Sonia Livingstone, Daniel Kardefelt Winther and Mariam Saeed, Global Kids Online Comparative Report, Innocenti Research Report, UNICEF Office of Research - Innocenti, Florence, 2019)]

Parents, caregivers and educators

Digital, media and information literacy skills alone do not provide a foolproof solution against disinformation, and the onus cannot be entirely on children to protect themselves. Our experts suggested that open dialogue between children, parents, caregivers and educators can promote critical thinking among children. Several reported that child focus groups, surveys and community-level research can be useful ways for parents, caregivers and educators to understand the information habits of the children in their care, and may be among the best ways to generate healthy community and policy responses that are locally relevant. Given the many reasons that children have for sharing information, talking to them about the consequences of doing so, especially when disinformation is a risk, may be helpful. Adults caring for and educating children are in a position to start these conversations and to prompt critical reflection and understanding.

UNICEF-Global-Insight-Digital-Mis-Disinformation-and-Children-2021.pdf

Opinion and proposals of the European Union on the issue of media literacy

Media literacy means "the ability to access, analyze, evaluate, develop, produce, and interpret media and encompasses the foundational skills that lead to digital citizenship." Digital citizenship "means a diverse set of skills related to current technology and social media, including the norms of appropriate, responsible, and healthy behavior." (https://edsource.org/2017/bill-would-help-california-schools-teach-about-fake-news-media-literacy/582363)

The European Commission of the Regions (E.C.R) (https://eur-lex.europa.eu/legal-content/EL/TXT/PDF/?uri=CELEX:52019IR1053&from=EN) welcomes the European Commission's initiative to tackle misinformation and points out that new ways of accessing and disseminating information require new skills that should be accompanied by a critical examination of information and its sources. Also reaffirms the views expressed in its opinion on "Tackling Internet Misinformation: A European Approach" and it stresses that disinformation, as a problem embedded in complex and rapid socio-economic change, must be tackled holistically. The E.Co.R believes that local and regional authorities are in a good position to participate in discussions on the threat of disinformation as well as to launch and coordinate measures to address the phenomenon.

The E.Co.R draws attention to the experience gained so far from various issues and campaigns in the field of civic education, which shows that raising public awareness and changing their behavior can only be achieved through a lengthy and complex process (including through the development of **media and information literacy**).

A large-scale, nationally representative survey in the US demonstrated that young people who receive media literacy learning opportunities are more likely to assess the accuracy of information correctly (Kahne, Joseph and Benjamin Bowyer, 'Educating for Democracy in a Partisan Age: Confronting the Challenges of Motivated Reasoning and Misinformation', American Educational Research Journal, 54(1):3–34, 2017), and that those who received media literacy education in school were 26 per cent more likely to judge an evidence-based post as 'accurate' than they were to judge an inaccurate one as 'accurate'.

By contrast, the study found that young people who did not receive media literacy education were just as likely to judge accurate and inaccurate posts to be 'accurate'. Political knowledge did not improve children's ability to correctly assess the accuracy of posts, but media literacy education did.

There is an important distinction to be made between children's digital and technical skills, such as being proficient in navigating browsers, using search terms and selecting relevant links, and their ability to evaluate the veracity of what they find online. One study found that students with greater information literacy but not other types of literacy (including news, digital and media literacy), are significantly better at recognizing mis/disinformation.(Jones-Jang, S. Mo, Tara Mortensen and Jingjing Liu, 'Does Media Literacy Help Identification of Fake News? Information literacy helps, but other literacies don't', American Behavioral Scientist, 65(2):371–88, 2019. https://doi.org/10.1177/0002764219869406)

A study in Indonesia found that students who were technically skilled in using multiple social media platforms nevertheless lacked confidence in their ability to distinguish between disinformation and accurate information. (Syam and Nurrahmi, '''I Don't Know If It Is Fake or Real News")'.

This is summed up in Dr Livingstone's observation that media literacy "sees media as a lens or window through which to view the world", whereas information literacy "sees information as a tool with which to act upon the world" (Livingstone, Sonia, 'On the Challenges of Cross-National Comparative Media Research', European Journal of Communication, 18(4):477–500, December 2003.   https://doi.org/10.1177/026732310318400391)
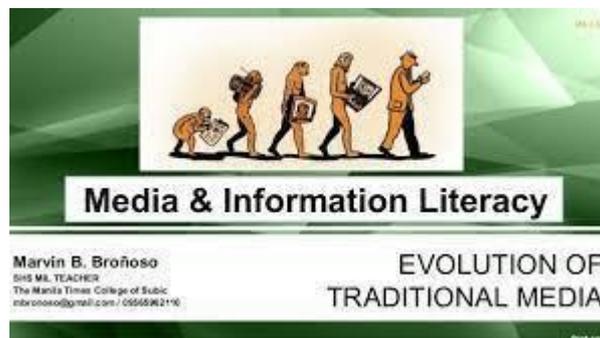
As recommended by UNICEF, the development of children's media and information literacies should be part of broader digital literacy efforts, delivered using age-appropriate curricula that match children's evolving capacities. (Nascimbeni, Fabio and Steven Vosloo, Digital Literacy for Children: Exploring Definitions and Frameworks, UNICEF, New York, 2019. www.unicef.org/globalinsight/reports/digital-literacy-children)

The media, politicians and decision-makers can discuss disinformation extensively, but only to a limited extent influence, the behavior of citizens. The European Commission also recognizes that it has not yet been possible to integrate all these aspects into citizen education programs, nor they have been integrated into the general perception of citizens or into the daily practice of the new media. In order to achieve long-term changes in behavior, there must be a focus on civic education and communication activities. Along with education systems and the development of political thinking and action, it is important that communication activities are as broad as possible and that target groups are properly informed through their preferred media channels.
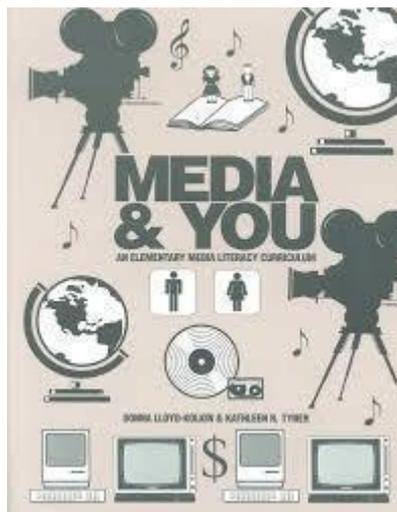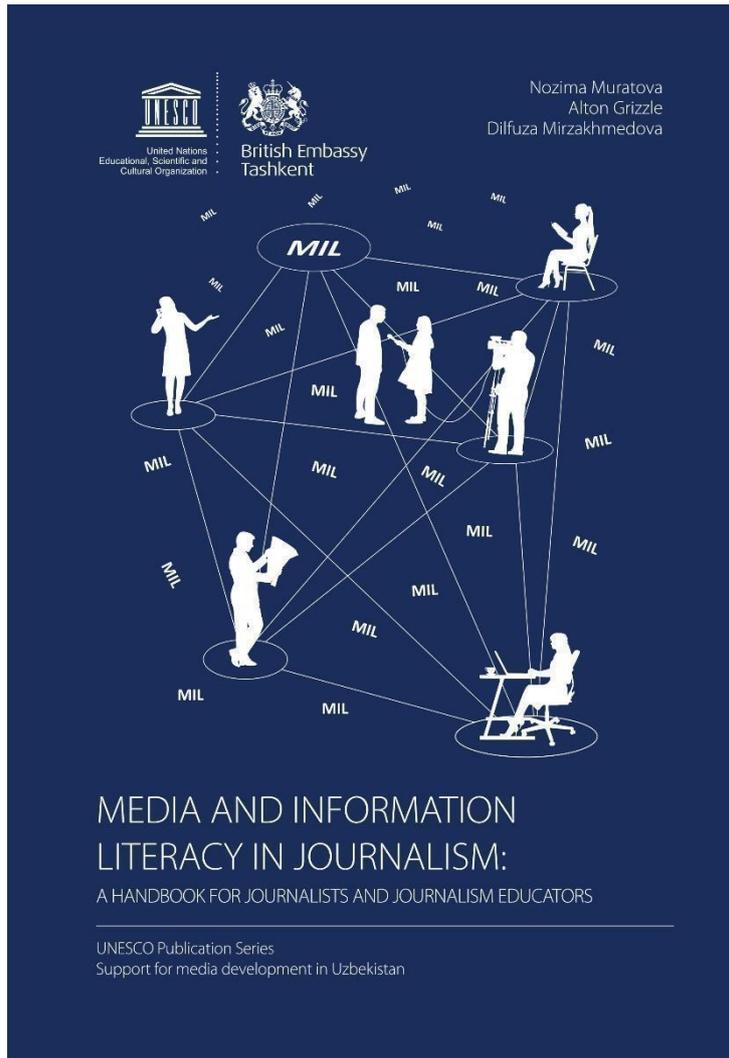
Individuals often do not have the necessary skills and knowledge and do not know how to react to false information or how to behave when the same or known persons fall victim to false information and hate speech. Smaller communities in particular still lack the necessary experience and knowledge on how to respond to global social networking platforms in a state of crisis.


New sources of information and dissemination require empowering citizens with the appropriate skills to resist disinformation on the Internet through knowledge, digital skills and action. The development of media and information literacy promotes citizens' critical thinking and allows them to examine information and its origins in detail. This process provides citizens with the opportunity to make conscious choices about the content they consume, a factor that greatly enhances their social resilience. The urgency of the matter is evidenced by the fact that more than half of the population of the EU Member States derive their daily updates from social media.

Disinformation and school education

Citizens need to be better informed about this problem, in particular through raising awareness through **school education**.
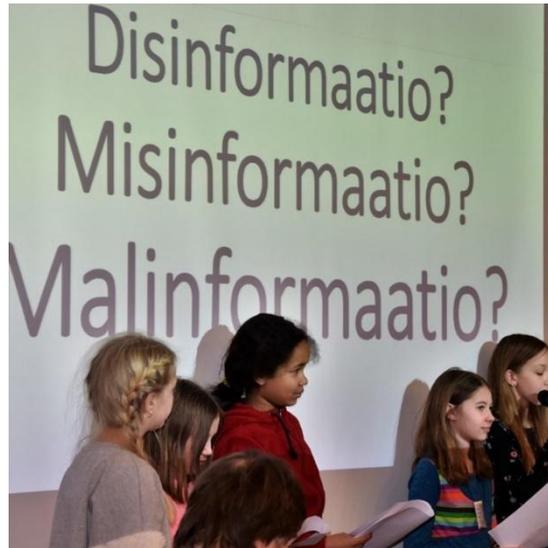
In this context, media literacy is now emerging as the best way to overcome the dilemma between disinformation and freedom of expression. According to one definition by Sonia Livingstone, Professor of Social Psychology in the Department of Media and Communication at the London School of Economics (LSE), media literacy is "the ability to access, analyze, evaluate and create messages in a variety of contexts". (https://eprints.lse.ac.uk/1027/1/What_is_media_literacy_(LSERO).pdf) Today, media literacy and information are receiving even more attention than ever before in the field of cybersecurity, as evidenced by Secure Internet Day 2021, when a large number of countries decided to focus their celebrations on information sharing Internet trust and reliability and misinformation, from the United Kingdom to Germany, Finland and Bulgaria, to give just a few examples. (https://europa.eu/rapid/press-release_IP-18-3370_el.htm)

This means that the supply of information and pedagogical resources on the subject continues to grow, for those teachers and educators who wish to address disinformation with their students and promote media literacy.

The Commission considers that a higher level of media literacy will help European citizens to identify online misinformation and to approach online content critically. To this end, it will therefore encourage fact-finding agencies

and civil society organizations to provide educational materials to schools and teachers. (https://www.cedefop.europa.eu/en/news/european-approach-media-literacy-digital-environment)

Therefore, the role of school and education is important in tackling the problem of disinformation. So, the school is called upon to develop policies and plan actions in this area.

As an example, Chavira, a former newspaper reporter, is one of the only K-12 teachers in California who spends most of her day teaching journalism. Using curriculum provided by the News Literacy Project, a nonprofit devoted to media literacy in the classroom, Chavira shows her students how to spot fake news, how journalists gather information and how students can improve their own communication skills.

Media literacy can be taught in any class, not just journalism or government, she said. "It's on all of us, as educators, to include this in our classrooms, just like we include technology," she said. "Reading, writing, critical thinking skills – these should be second nature." (https://edsource.org/2017/bill-would-help-california-schools-teach-about-fake-news-media-literacy/582363)

Of course, it is necessary for these actions and good practices to have consistency and duration, so that they are as effective as possible in dealing with this problem. In other words the school needs to formulate a consistent policy, teaching its students how to "interpret" the news, but also the image and comments that accompany this news.

As students progress in their education and begin their professional careers, they need to be able to distinguish bogus news stories from true, fact-checked journalism. Being able to spot disinformation disguised as legitimate news will enable students to combat the widespread distribution of harmful, misleading, and false information..
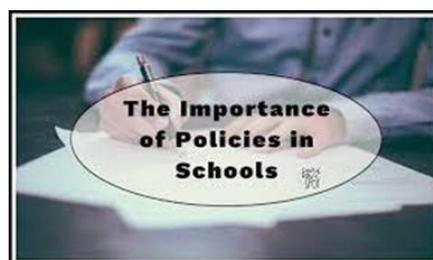
School policy about disinformation

In conclusion, a school that aspires to be effective in tackling the problem of disinformation and to develop relevant skills within its students on how to manage a news story should follow the following policy:

A) To have trained teaching staff capable of solving questions and of utilizing educational material suitable for the development of students' media literacy. (The editions of the B*IK newsletter*, the quarterly *Better Internet for Kids newsletter*, may be of interest to educators seeking more information on misinformation and media literacy.

Finally, a good starting point for educators who want to go one step further and develop a participatory literacy strategy for social media across the school would be the *sml4change program* recommendations. (https://www.etwinning.net/el/pub/etwinning-plus/highlights/simple-ways-to-address-disinfo.htm)

B) **To be able to include the issue of disinformation in the timetable**- despite the fact that it's always a problem finding a space in an over-full curriculum-,involving as many students and teachers of several specialties (Philology, Sociology, Informatics Visual Arts e.t.c).

C) In order to find out whether our students know what disinformation is and how it is spread, **to conduct a survey** (e.g. through a questionnaire) and то be able to process the answers so that conclusions can be drawn.

D) **To help its students to expand their digital horizons in order they to include diverse voices and opinions.**
Students need to seek out reliable sources that express diverse opinions and represent varied perspectives on current events to educate themselves about different viewpoints on issues. Sometimes these sources aren't digital, but flesh-and-blood.

E) **To organize its teaching based on 3 fundamental questions**:
What is disinformation?
How does disinformation affect the lives of young people?
How can we deal with it effectively?

F) **To set goals for its students**
A) to develop skills so that they can distinguish true from false news
B) to develop critical thinking
C) to express their feelings openly and to understand why the news affects them.

G) **To discuss** the concept of disinformation with its student, **to analyze it** in depth, to **comment on** its various forms and **to observe** how the spread of false news affects our lives, our consumer behavior, our political views and our health, and how it threatens freedom and democracy

HOW TO SPOT FAKE NEWS

CONSIDER THE SOURCE
Click away from the story to investigate the site, its mission and its contact info.

READ BEYOND
Headlines can be outrageous in an effort to get clicks. What's the whole story?

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

SUPPORTING SOURCES?
Click on those links. Determine if the info given actually supports the story.

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

IS IT A JOKE?
If it is too outlandish, it might be satire. Research the site and author to be sure.

CHECK YOUR BIASES
Consider if your own beliefs could affect your judgement.

ASK THE EXPERTS
Ask a librarian, or consult a fact-checking site.

IFLA
International Federation of Library Associations and Institutions
With thanks to www.FactCheck.org

H) To give its students news control tools to use whenever they have to distinguish true from false news:

1. Source control: In which site was the story published? Is it reliable? Are the images clear, is the text clearly written without spelling mistakes and exaggerations?

If the students are unsure, they learn to click on the "About Us" section and check if there is a clear outline that explains the Agency's work and history.
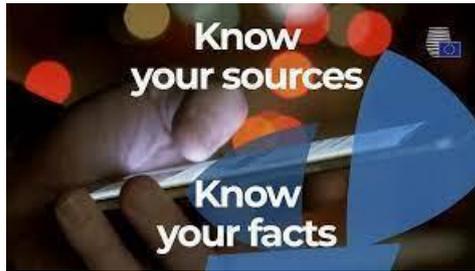
2. Author check.

In order to see if everything the author writes is trustworthy, the students look for other texts by the same author. If he has not written anything else or if he writes on sites that seem unreliable, they should think twice before they trust him.

3. Check of the references and links in the article.

Students learn to click on links and check their validity

4. Reverse image search in Google.

In this way the students learn to search with images rather than words. Uploading an image, they will see all the other websites that have similar images. At the same time they are informed by Google about other sites where these images have also been used and if they have been used irregularly

5. <u>Considering what we know about the topic</u>

The students should reflect upon what they already know about the topic. Does what they know match up with the story they are reading? Does it sound believable, or is it surprising? Do they know enough to make an informed decision on how trustworthy the story is?

This will help them make sounder judgments as to the veracity of the story – or at least, it will help them consider if they should trust the news.

6. <u>Sharing a story</u> only after checking and careful consideration

7. <u>Challenging our prejudices.</u>

The students are asked to consider whether this news confirms their beliefs. They wonder if it would make a difference if the news was shared by a friend or a celebrity they follow.

One of the wonders of the digital age is that it has brought people with like-minded ideas and values together across communities, across the country, and across the world. However, digital technology has also led to a digital

bubble for many people, who receive news and information only from sources that reinforce their existing biases and beliefs.

Social media users with strong political leanings may not immediately recognize that their Facebook friends who echo those viewpoints are spreading fake news. Just as with people over age 65 being the most susceptible to sharing fake news, it's possible that individuals who share your worldview might be knee-jerk sharing without properly vetting the source of the information. (https://onlinedegrees.und.edu/masters-cyber-security/tips-for-students-on-how-to-identify-fake-news/)

8. Submitting a report-complaint to the platform,

when students confirm that the news they are reading is false. They have to raise awareness within their digital circle of family, friends, and associates about the dangers of fake news. If they notice that someone is sharing fake news, they have to speak up. Also they have to alert the person and their audience that the "news" item they posted or shared is false, and to tell them about the tips and resources in this guide so they will know how to identify fake news and help combat it.

I) **To share trustworthy news sources with students**.

Children and teenagers enjoy reading about current affairs and sharing what they've learned. So, we try to relate our classroom topics to current affairs whenever it is possible.

We also try to point our students in the direction of trustworthy news sites, designed for younger readers. (e.g *Newsround*, which is produced by the BBC and aimed at children and young people (https://www.bbc.co.uk/newsround/42185484) *First News* is a newspaper for children aged 7 to 14, and *The Day* was launched a decade ago as a daily online newspaper for teenagers. After all, it's important to provide our students with some trustworthy news sources, so they know what responsible journalism looks like. (https://blog.pearsoninternationalschools.com/how-to-teach-your-students-to-recognise-fake-news/)

A number of COVID-19 data disinformation and speed control resources, covering different languages and ages, have been created by the Insafe Network of European Safe Internet Centers and are available through *the Better Internet for Kids portal* (BIK) - and an even greater variety of resources are available in *the Better Internet for Kids resource gallery.*

In addition, the *SELMA* toolkit offers a range of resources on media analysis and media production which, while primarily focused on online hate speech, are still a great way for young people to better understand how information is produced.

(https://www.etwinning.net/el/pub/etwinning-plus/highlights/simple-ways-to-address-disinfo.htm)

J) To learn its students to upload the theory to practice.

Through specific examples, students apply what they have learned and find out if the news is true or false.

InfoWars: There's a war on for your mind!

K) To encourage students to express themselves and produce their own work on the subject

In the final stage, students create their own digital book, a song, a poster, a cartoon or use applications such as Komika or CapCut to create a relevant story.
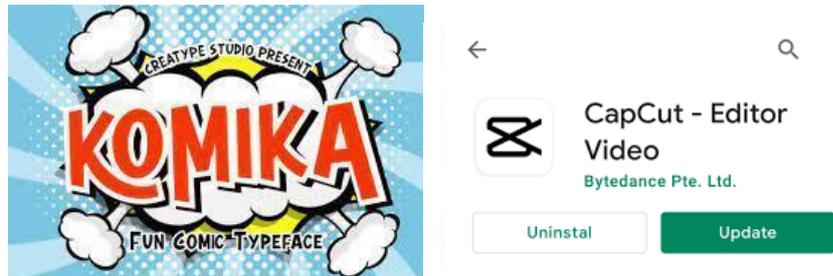
L) To monitor and evaluate the action of the participating students by monitoring the progress of the work (with suggestions, interventions, questionnaires, a diary of the project, the meetings and the obligations of each group)

M) To ensure that the results of research, the progress of work and the final product of students are disseminated (by the teachers) to other schools in the country and Europe (through educational platforms and European programs), but also through the media, social media and local authorities. At the same time, the other students of the school and the Association of Parents and Guardians are informed. The school's website is constantly updated and displays the students' projects and the progress and completion of their work.
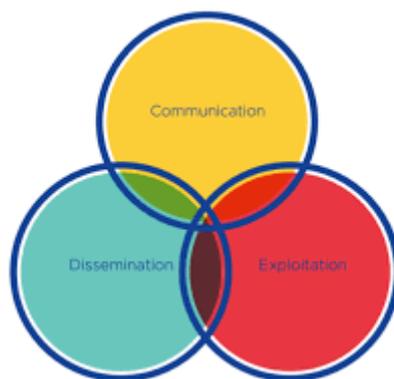
Thus, teachers and students are given the opportunity to exchange views and experiences, to discuss even the obstacles and difficulties of implementing the programs, but mainly to be satisfied with the presentation of the program and their contribution to the dissemination of results and to the creation of the active citizen with critical thinking.

(http://exclusion.pep.uoi.gr/ROMA/agogi/agogi_kef3.htm).

As we read on the following website: https://www.google.gr/search?sxsrf=AOaemvK26ih63AVg_aTSx7KmweaLk

9xb3Q%3A1641901700560&lei=hG7dYYu9IaWFxc8Ppb-q-
A8&q=5%20strategies%20to%20disseminate%20information&ved=2ahUKEw
iLj_i80Kn1AhWlQvEDHaWfCv8QsKwBKAB6BAhBEAE&biw=1745&bih=800&d
pr=1.1,

"once the dissemination objective and the audience are identified, there are a variety of ways to share the developed content.

Common methods of dissemination include:

- Publishing program or policy briefs
- Publishing project findings in national journals and statewide publications
- Presenting at national conferences and meetings of professional associations
- Presenting program results to local community groups and other local stakeholders
- Creating and distributing program materials, such as flyers, guides, pamphlets and DVDs
- Creating toolkits of training materials and curricula for other communities
- Sharing information through social media or on an organization's website
- Summarizing findings in progress reports for funders
- Disseminating information on an organization's website
- Discussing project activities on the local radio
- Publishing information in the local newspaper
- Issuing a press release"
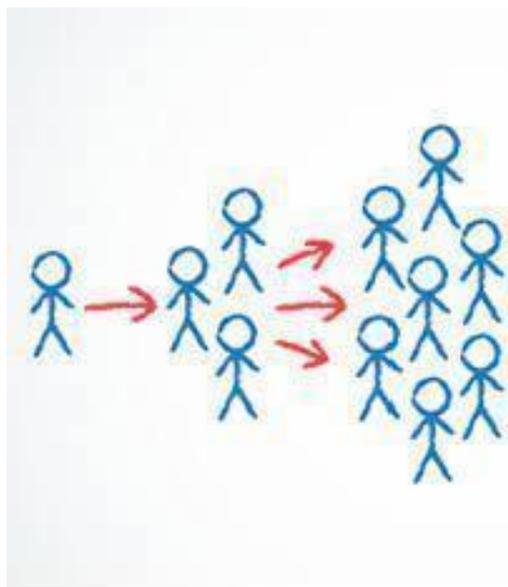
Epilogue

In conclusion, the society that is interested in creating active and critical citizens, "invests" in the development of the skills of its students. Education today must be flexible, creative and complex. The modern school aims to change standards for the society, for the education and for the teacher.

We know that there is now a new generation of students who want a learning environment that incorporates digital tools, adapts to individual learning styles and encourages collaboration and teamwork. The role of the teacher in this environment is to create the conditions for innovation and not to provide ready knowledge.

Now knowledge is a journey. Depending on the complexity of the subject, the student's abilities and the means available, the journey can vary in steps and duration. The student cooperates in the development of the educational process, is a collaborator, organizer and through experiential-social activities

seeks, acquires and manages knowledge. The learning process must be active, not passive.
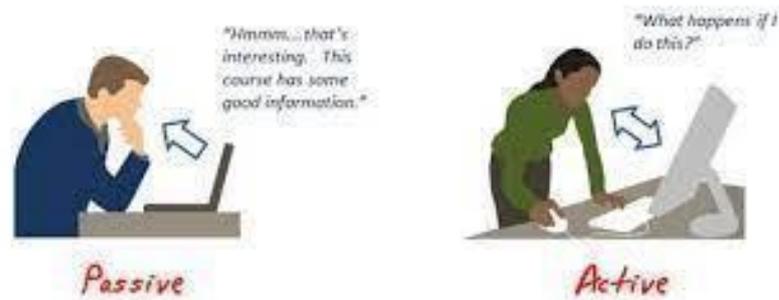
During the learning journey the teacher must be present, inspire his students, create the culture of research and support the steps of his students in their own path. Communication and interaction between teacher and students should be taken for granted in today's school.

The open, modern, flexible and creative school is not limited to the classroom. It keeps the interest of the students undiminished with educational experiential excursions, visits to museums and places of culture and spectacles. In the era of technological and digital revolution, the role of the school in the media literacy of its students is very important too.

Nowadays, when students' attention bounces from one screen to the next, it is imperative that they strive to connect with classmates, faculty, and others in real life. Face-to-face remains the most effective way for us to share new ideas and political perspectives. Being trained to seek out the full spectrum of facts and opinions on a matter makes students better prepared to identify and face all kinds of social problems, hence disinformation.

picjumbo.com

HOW TO SPOT FAKE NEWS

10 TIPS FOR TEACHING AND LEARNING ABUT FAKE NEWS

VILNIUS VOCATIONAL TRAINING CENTRE OF TECHNOLOGIES

VILNIUS VOCATIONAL TRAINING
CENTRE OF TECHNOLOGIES

INTRODUCTION

By spending hours online, getting to know the world of media content, we are no doubt confronted with false news, misinformation or even hostage to information warfare. Developing media literacy, critical thinking and analytical skills is especially important in assessing this flawed content that reaches us with a large flow of information. Of course, education serves this purpose, so it is not surprising that more and more countries in the world are integrating teaching about fake news into educational programs for beginners, educated pupils and students to varying degrees of extent and in different forms.

Convinced of the relevance of this topic in education, we can find both scientific and journalistic insights. *Research has shown that an inability to judge content has two equally disappointing consequences: people believe in everything that conforms to their preconceptions, or cynically do not believe in everything. Either way leads to polarized and isolated citizenship. Other recent research shows that teenagers are technically educated, but most fail to assess the veracity of news articles and images[26]*, - The New York Times reports.

And here in Finland, the development of information literacy and critical thinking became part of national education programs since 2016. *In math lessons, students learn how easy it is to lie with statistics. In art, they see how the meaning of an image can be manipulated. In history, they analyze prominent propaganda campaigns, and Finnish language teachers together with students look for ways to confuse, mislead and deceive[27]*, - one of the teachers describes the Finnish educational experience.

It is understandable what is at the peak of such education. Of course, a teacher who, with his personal example, knowledge, skills and sincere care, can help young people not to get lost: enable digital literacy of pupils and students, develop critical thinking and the ability to analyze. It is clear that if a teacher takes on this mission of teaching false news for the first time, there will be little hurdle without systemic support, so this manual provides teachers with methodological advice, action scenarios and potentially useful teaching and learning resources. All of this is set out in ten tips - points covering the content of this guide.

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[26] https://www.nytimes.com/2020/02/20/education/learning/news-literacy-2016-election.html

[27] https://www.theguardian.com/world/2020/jan/28/fact-from-fiction-finlands-new-lessons-in-combating-fake-news

For inspiration!

We introduce you to one of the high schools of New York in the U.S., the George Jackson Academy, where an English and Literature teacher runs a course to teach the recognition of fake news as part of the News Literacy Project[28]. The short story reveals the intentions of the project creators and the challenges of the teacher, as well as the students' experiences of learning about fake news.

→   How to teach kids to spot fake news[29]

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[28] https://newslit.org/

[29] https://www.youtube.com/watch?v=W-N56L578jo

FIRST ADVICE:

TEACH ONLY THROUGH ACTIVE LEARNING

Fake news is a very dynamic topic: strategies and technologies of (un)intentionally disseminating false information creation, spreading and professionalism are constantly evolving. In order to teach these topics, the teacher must constantly feel the pulse, follow the trends, and archive the latest and most resonant examples.

First of all, the teacher himself must be resistant to false news: have a deep knowledge, be able to identify false news, demonstrate knowledge and skills by his example.

Principals of operation to help at the beginning of an educational practice:

- The subject of fake news is currently relevant teaching/learning content, so each region or country, together with the responsible authorities, is implementing large-scale national and information security, media transparency or educational projects. The latter often develop teaching/learning tools and implement training programs for stakeholders. It is beneficial for a teacher to look at teaching and learning resources in their own country and, of course, to take advantage of opportunities for improvement.

- Institutions or non-governmental organizations have a large pool of specialists and partners that can be used to implement education for students. If a teacher is willing and able to use the experience of professionals to consult or organize education for his/her students, it is a fruitful collaboration.

- Of course, the teacher must not give up self-education! It is useful to constantly monitor the content of information platforms, educational initiatives and specialists who carry out an educational mission on the topic of fake news in your country.

Some useful links:

- A Digital set of teaching materials, Check or Cheat[30], in which the teacher will find a played teaching material for students of the same

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[30] http://www.checkorcheat.eu/

name and a valuable manual for the teacher 10 disinformation types in social media[31].

- The Civic Resilience Initiative (CRI)[32] is a Lithuanian non-profit non-governmental organization established by a group of experts operating in the European Union. CRI focuses its activities on increasing the resilience of Lithuanian and other societies in the region through inclusive means of education. The organization aims to increase resilience in the areas of security, media literacy, disinformation, cyber, civic and popular activities by enabling civil societies themselves to become actively involved in educational activities. The authors of this initiative produce relevant publications, including Cri 101 On How Not To Be Fooled[33].

- EAVI[34], the European Audience Association, is an international non-profit organization founded in Brussels that declares for the media literacy and citizenship. EAVI supports the inclusion of initiatives that enable citizens to read, write and participate in public life through the media. EAVI represents the interests of citizens in Europe through lobbying, conferences, networking, research, media literacy projects, the development of good experience and the development of online content, with a particular focus on youth education.

- First draft[35] - a non-profit organization that provides practical and ethical guidance on how to find, check, and publish the content from the social web. The initiative brings together a wide network of partners from international news outlets, universities, platforms and civil society organizations.

SECOND ADVICE:

IDENTIFY STUDENTS' EXISTING OR AQUIRED KNOWLEDGE

Young people immersed in the digital information space feel comfortable here and are or think they are experts. It is important for the teacher to find out what, with dilettantes or experts, the class encounters - this will help him/her to choose the right teaching / learning strategy. Before diving deep, it is useful to find out what the student already knows and is paying for.

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[31] http://www.checkorcheat.eu/wp-content/uploads/10_DISINFORMATION_TYPES_Check_or_Cheat.pdf

[32] https://cri.lt/#home

[33] https://cri.lt/wp-content/uploads/2021/08/CRI-101-ON-HOW-NOT-TO-BE-FOOLED_compressed.pdf

[34] https://eavi.eu/

[35] https://firstdraftnews.org/

In order to stimulate the brain, a well-known method - mind / thoughts map, that will allow students to identify what information and concepts are available to them, can be used.

On the basis of a mind / thoughts map, it is useful to choose the most important elements, concepts and keywords of the fake news topic.

Briefly about the method:

- The method can be used to both individual and group work.

- The method can be implemented on a sheet of paper, on a whiteboard or by electronic resources. If you want to try digital ways creating mind maps, just search the web. For example, 5 Popular Mind Mapping Tools For Teachers And Students. [36]

- It is important to discuss the content of the mind map created by the students, the trends visible in them, and the questions that arise for the students.

For the inspiration!

A map of concepts (thoughts / mind) is a visual way to organize thoughts and make connections between ideas. You can use a concept map to create and organize ideas, outline a task, or test your knowledge. The following steps are recommended when creating concept maps:

- Step 1. Identify the main topic and think about everything that is known about it. All relevant content from lectures, texts and other course material should be used.

- Step 2. Break down the information into key points.

- Step 3. Create a map: start with the main topic, then figure out the main points and supporting information.

- Step 4. Look through the map and search for more connections. Use arrows, symbols, and colors to show links to the ideas.

- Step 5. Include details: definitions, equations, and diagrams are useful.

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[36] https://www.classpoint.io/mind-mapping-tools-for-teachers-and-students/

- **Step 6.** Analyze and refine the map. Control questions: how the ideas it together, whether all the necessary connections are depicted, or whether the map is accurate, logical and detailed.

- **Step 7.** As more knowledge becomes available, a map of concepts can be updated to form a deeper understanding.

After accomplishing these simple 7 steps you can create a concept map to help you learn. The following is a visual explanation and implementation of these steps in English (with the possibility of Spanish subtitles).

→ [How to Create a Concept Map](https://www.youtube.com/watch?v=sZJj6DwCqSU)[37]

For the inspiration!

It is worth visiting Hazel Wagner PhD in Mathematics. The researcher specializes in mind mapping, teaching others how to use this method to improve one's memory, study, planning and more. The following is a presentation by H. Wagner at the TEDx conference in English.

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[37] https://www.youtube.com/watch?v=sZJj6DwCqSU

→ [Want to learn better? Start mind mapping | Hazel Wagner | TEDxNaperville](38)

THIRD ADVICE:

TOGETHER WITH THE STUDENTS REFLECT THE KNOWLEDGE YOU ALREADY HAVE

Concerned information about students' existing or acquired knowledge on the topic of recognizing fake news can be used, for example, in the incomplete sentence method. This method not only explores what students may know and know, but also what they would like to learn, what individual questions should be answered in teaching. This will help to form a common list of knowledge and skills for the class. With it, the teacher will be able to choose better teaching / learning strategies and respond to students' curiosity needs.

Briefly about the method:

- The method can be used to both individual and group work;
- The method can be implemented on a sheet of paper, on a whiteboard, or by electronic sources;

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[38] https://www.youtube.com/watch?v=5nTuScU70As

- At the beginning of the study the first part of the table is filled in with the students: *I know that..., I want to know...* – and at the end of the study – *I learned...*

- It is important to discuss the content of the list, the trends visible in it, and the questions that students have.

- The following is the example of the method application table.

The name of the topics / topics cycle		
I know that...	I want to know...	I learned...

For the inspiration!

It has already been mentioned that the list of the knowledge can also be formed using interactive tools: digital whiteboards, templates of the electronic tool suitable for displaying the contents of the table above. One of these is the Padlet, which can be used to create a variety of information templates. Here's a short video tutorial in English on what features the tool can take in Padlet.

→ Padlet Tutorial for Teachers + 8 Ways to Use With Students[39]

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[39] https://www.youtube.com/watch?v=x9IQVofS43I

FOURTH ADVICE:

PAY SUFFICIENT ATTENTION TO THE MOST RELEVANT CONCPTS

- When teaching and learning about fake news, exploring related topics, it is useful to know the most important concepts properly: to name them, to discuss them, to use them in discussions. List of the most important concepts and phenomena that are recommended to be revealed in the curriculum:

- Misinformation. The phenomenon in which incorrect information is shared but is not intended to harm (i.e., an error).

- Disinformation. The phenomenon of sharing false information in a deliberate attempt to harm.

- Malinformation. The phenomenon of sharing real information in an attempt to harm (e.g., personal bank account details).

- Deepfake. AI (artificial intelligence) technology, used to create or change videos by editing faces (changing faces or creating facial features).

- Pseudo-science. It also consists of statements, beliefs or practices that are supposed to be scientific and factual but are incompatible with scientific methods.

- Content manipulation. This happens when an aspect of the original content is changed, usually with photos or videos. Visual media can be transformed by manipulating photos, commonly referred to as 'photoshopping'. Image manipulation is the editing of digital video using traditional methods of image processing and image editing, as well as the use of artificial intelligence techniques such as facial recognition.

- Conspiracy theory (collusion). It is an explanation of an event or situation that highlights the conspiracy of sinful and powerful individuals, often their political motive, when other explanations are more likely.

- Title bait. This (clickbait) is a form of false advertising that uses references or hyperlinks. It is designed to grab attention and force users to follow them and read, watch, or listen to linked online content that is deceptive, usually sensational, or misleading.

- <u>Trolls.</u> This is a person who deliberately tries to excite or start a dispute, especially by posting offensive or unpleasant things online.

- <u>Bot.</u> This is software that performs automated tasks on the Internet (in this case, tracks social media accounts and interacts by liking or sharing content, commenting, or using other features of the platform).

- <u>Fake account.</u> This (puppet account) is an account that someone creates to act in a way that does not allow them to behave publicly or support certain content (to vote for their material and positively comment on, praise, or promote their work).

- <u>Fake friendship (pretending).</u> This (befriending) pretending of being a friend (or wanting to one) on social networks to deceive or exploit (i.e., extract personal information, a photo, a video).

- The following is a list of terms and their definitions that correspond the content to the tutorials recommended in this manual (available in English, Greek, Spanish, and Lithuanian) [10 Disinformation Types used In Social Media](#)[40][, where a list of the most relevant terms with detailed explanations are marked out.](#)

For the inspiration!

Sometimes it is useful to use the word cloud method to analyze concepts or phenomena. This method serves to process and synthesize information in a simple, attractive, and concise way. Students who create this visual source will memorize the words and better understand the topics they will explore during the lessons.

Briefly about the method:

- The method can be applied to both individual and group work;

- The method is most convenient to implement using electronic tools;

- It is important to discuss the content of the formed word cloud, the tendencies visible in it – the words that are highlighted (most often mentioned).

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[40] http://www.checkorcheat.eu/disinformation-types/

The word cloud method is convenient to use not only to analyze concepts or phenomena, but also to compile sets of information elements - answers to a given question of a teacher. There are plenty of free electronic word cloud generators, so you can choose the most functional digital tools. As an example, the following is a video story in English about the possibilities of using the *Mentimeter* tool.

Create an Awesome Word Cloud Live with Mentimeter[41]

FIFTH ADVICE:

TEST YOUR KNOWLEDGE AND DISCUSS THE RESULTS

It is useful to test knowledge for both diagnostic, educational and (self-) control purposes. It is recommended to develop and use tests in which students are asked not to guess the correct answer but to apply knowledge. How to do it? Tests can include the following content elements:

- Situations and problematic issues;
- Visual examples (photos and video reports) in which the relevant elements of the fake news should be identified;

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[41] https://www.youtube.com/watch?v=I3UuTiH5krg

- Use relevant examples – what is used and known to students as tools now, resonant situations, and fresh problems.

Briefly about the method:

- The method can be applied to the individual (seft) assessment;

- Testing is optimally implemented by electronic tools to insert samples of media (photos, video reports) and to monitor the level of knowledge in the classroom before or after the course.

- It is important to discuss the most common mistakes with students.

For the inspiration!

Of course, in addition to creating unique content, it is possible to use already created openly available sources for testing, such as:

- Fake profiles on social media are on the rise and may be harder to detect than expected. The [ZeroFox](https://www.zerofox.com/)[42] platform includes a test (in English) that can be used to check if we are able to decrypt fake real posts and profiles from fake ones (https://www.zerofox.com/find-the-fake/[43]).

- The learning platform Spot the Deepfake[44], available in English and Spanish, is created to educate the identification of *Deepfake* technology; it has developed a learning test that includes not only textual but also visual material ([45]https://www.spotdeepfakes.org/en-US/quiz[46]).

- If you still want to develop and apply electronic tests, a variety of digital resources are available. As an example, the following is a video tutorial on how to create interactive electronic tests using the *Google Forms* tool.

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[42] https://www.zerofox.com/

[43] https://www.zerofox.com/find-the-fake/

[44] https://www.spotdeepfakes.org/en-US

[45] https://www.spotdeepfakes.org/en-US/quiz

[46] https://www.spotdeepfakes.org/en-US/quiz

→ [How to Create a Google Forms Quiz | Self Grading and Imports into Google Classroom](https://www.youtube.com/watch?v=p4llNhYinuM)[47]

SIXTH ADVICE:

USE A LOT OF AND VARIOUS VISUAL MATERIAL

The topic of fake news is closely related to visual content: recordings, photos and video reports. False information is often illustrated not only by the written word but also by the media sources that support it. It is true that the teacher can use the same for good purposes - to revitalize educational activities.

The visual teaching material will deepen the understanding of the information, reproduce real examples and thus create a real impression, help the teacher to convey and master the theoretical part of the teaching material.

The following are some examples of media for implementing individual lesson topics that may be relevant to the organization of the following educational activities:

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[47] HYPERLINK "https://www.youtube.com/watch?v=p4llNhYinuM"https://www.youtube.com/watch?v=p4llNhYinuM

- Teaching theory;

- Implementation of an introduction to practical tasks;

- Basis for discussions;

- Illustrations of examples.

Topic – recognition methods of fake news

Probably each of us is faced with a situation where acquaintances on social networks begin to share vague and polarizing information, truths or other statements that very often have nothing to do with reality and are the most likely lie.

The following 6-minute story on how to recognize fake news (in Lithuanian with the possibility of subtitles in English and Russian) updates the five most important steps in identifying lies:

- Step 1 - Check the source. Questions worth answering: what is the source of funding, is it not visually imitating other known sources, is the source known to the public, and what is its reputation?

- Step 2 - Check the text. Questions worth answering: are there grammatical errors, what sources and authorities are used to argue, are emotions not manipulated, or are they not artificially exacerbated?

- Step 3 - Check the visual information. Questions worth answering: Are the images used unedited, or have the images not been used before the image is related to the content?

- Step 4 - Check the disseminators. Questions worth answering: is the author real, is the author known and what is his or her reputation, or is the link publicized by bots?

- Step 5 - Report the lies. Questions to answer: Does the social network or platform have the functionality to report fake news, and how can I submit fake news in your country?

→ [5 steps how not catch on lies](48)[48]

Topic – Deepfake technology

Deepfake technology is a breakthrough in the development of artificial intelligence and 3D technology that can be used for both spectacular educational experiences and threatening manipulation. Computer scientist Supasorn Suwajanakorna talks about this in an 8-minute video story in English (with the option of 30 more subtitles).

You can check out, whether you can identify fake videos, where famous people say what they have never said in real life, by watching the recommended video. The researcher shows how, as a graduate, he used artificial intelligence and 3D modeling to create photorealistic fake human videos in sync with sound. The following post provides more information on the ethical implications of this technology and the creative possibilities and actions taken to combat its misuse.

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[48] https://www.youtube.com/watch?v=kkb40Xg5E7I&t=6s

→ [Fake videos of real people -- and how to spot them | Supasorn Suwajanakorn](#)[49]

Topic – manipulation of the content

The media has always been a source of controversy and criticism, especially now, in the days of so-called 'fake news'. Numerous studies show that an increasing number of members of the public view the media more negatively than positively. Some people accuse the media of bias, subjectivity and unreliability, and unfortunately there are examples that could really confirm these claims.

Users post photos online as the media can manipulate the truth, despite specific information or parts of the image that instantly give the photo a whole new meaning. Two different reports or shots from the same event can be captured completely differently.

The Internet is increasingly filled not only with manipulative photos, but also with false and misleading videos. These videos, distributed by politicians, advocacy groups and everyday consumers, are watched by millions. One of the initiatives, "[Fact Checker](#)[50]", aims to create a universal language for

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[49] [Fake videos of real people -- and how to spot them | Supasorn Suwajanakorn - YouTube](#)
[50] [Fact Checker - The Washington Post](#)

flagging manipulated videos and prosecuting the creators and participants of this misinformation. This platform expands on three main ways to change a video: filmed material extracted out of context, deceptively edited, or intentionally altered. These categories are further subdivided into the subcategories which are shown below.

It is recommended to analyze such examples and discuss them in class. For example:

→ Photo manipulation kit.[51]

→ Video manipulation kit.[52]

Topic – conspiracy theories

Within the framework of this topic, we introduce you to Quassim Cassam - Professor of Philosophy at the University of Warwick. In an 18-minute story in English, Quassim discusses conspiracy theories and their implications. He examines how they threaten our knowledge and stresses the importance of refuting conspiracy theories as we are increasingly confronted with false news and alternative facts.

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[51] https://spotlightstories.co/32-examples-media-manipulating-truth/
[52] https://www.washingtonpost.com/graphics/2019/politics/fact-checker/manipulated-video-guide/

→ Conspiracy Theories and the Problem of Disappearing Knowledge | Quassim Cassam | TEDxWarwick[53]

SEVENTH ADVICEE:

DEVELOP INTERACTIVE, DIGITAL TEACHING / LEARNING CONTENT

Fake news is basically about phenomena that are, in many cases, created, discovered and distributed in the digital space. In the latter, a young person: feel familiar with this environment as he is at home, knows or believes he knows how to behave in it, is able to use a lot of digital tools and platforms.

It is also necessary for the teacher to be comfortable with this environment - to get to know with it, to get used to it and to get used to creating digitized, interactive content, which can lead to better student involvement, which means a deeper understanding and assimilation of the topics taught.

The Internet is full of digital tools for teachers. Many of them can be found in NWEA[54]. It is a research-based non-profit organization that supports students and teachers around the world in developing assessment solutions that

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[53] Conspiracy Theories and the Problem of Disappearing Knowledge | Quassim Cassam | TEDxWarwick - YouTube
[54] NWEA Home

accurately measure growth and skills, and provides insights to help tailor teaching. For example, the list of 75 digital learning tools[55] published on the platform can be used.

Here are some more recommendations for digital teaching / learning content development tools.

Tool - Canva for Education

"Canva for Education[56]" is free offer for all educators. With it, the teacher gets all the benefits of the highest quality features, such as millions of images, fonts, graphics, videos, animations and templates, as well as a special classroom space where students and teachers are invited to share, view and organize their work.

The following is a 19-minute instructional video in English on how to take advantage of the digital platform.

→ Get Creative with Canva for Teachers[57]

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[55] https://www.nwea.org/blog/2021/75-digital-tools-apps-teachers-use-to-support-classroom-formative-assessment/
[56] Create and Collaborate | Canva for Education
[57] Get Creative with Canva for Teachers - YouTube

Tool - Mentimeter for Education

Mentimeter[58] is an interactive presentation platform that makes presentations, meetings, and lectures more engaging. Audiences connect to presentations via smartphone without downloading anything. Mentimeter allows you to interact in real time and visualize opinions, questions and thoughts using WordClouds, multiple choice questions, question and answer quizzes and more.

Mentimeter can always be used for free, but if you want unlimited slides of questions in one presentation and many other features, paid plans are available.

The following is a 45-minute instructional video in English on how to take advantage of the digital platform.

→ Mentimeter for the digital classroom - Recorded Webinar[59]

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[58] Interactive presentation software - Mentimeter
[59] Mentimeter for the digital classroom - Recorded Webinar - YouTube

Tool - Slido for Education

Slido[60] – it is another platform that allows students to be interested in face-to-face surveys, quizzes and interactive questions and answers without downloading programs or leaving a presentation. The "Slido for Education" package also includes integration with Microsoft PowerPoint and Zoom Video Webinar.

The following is a 46-minute instructional video in English on how to take advantage of the digital platform.

→ Introducing Slido for Education: Powering Two-way Interaction During Virtual Classes[61]

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[60] Slido for Education | Slido - Audience Interaction Made Easy
[61] Introducing Slido for Education: Powering Two-way Interaction During Virtual Classes - YouTube

EIGHTH ADVICE:

KEEP PRACTICING

It is advisable to develop and use teaching / learning tools and tasks based on practice. Theoretically, knowing how to recognize false information is extremely important, but certainly more important, is to develop the ability to verify information in practice.

The following tools and information materials, presented on individual topics, are available for practical training and task preparation.

Topic – pseudo - science recognition

For climate change and evolution, why are beliefs that contradict research so fruitful? Massimo Pigliucci, a philosopher of science and author of "Nonsense on Poles", examines what makes people hold on such beliefs and how to separate facts from fiction. Massimo Pigliucci is a professor of philosophy at CUNY-City College, New York.

An 11-minute video presentation in English by a researcher is recommended for this topic.

Topic – recognition of content manipulation

There are tools that can help verify that the images and illustrations used in the text are fake, manipulative. A list of Manipulative Photo Recognition Tools[62] is available on the Stop Fake[63] platform, where you can find 13 different tools. Some of the most commonly used are also recommended trying in lessons, such as:

Foto Forensics[64] – a site where error level analysis (ELA) can be performed, i.e. y. find parts of an image that have been added to it after editing. After processing the photo, the program creates an image with the edited parts. In addition, the program will also provide EXIF data of the photo.

Google Search by Image[65] –reverse image search. There you can upload a photo to find its source and find out where else it was published.

Of all the types of misinformation, video is one of the hardest facts to verify. It's not as easy to search as text and photos, and making fake videos is getting easier and harder to detect. With these challenges in mind, the following 4-

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[62] https://www.stopfake.org/en/13-online-tools-that-help-to-verify-the-authenticity-of-a-photo/

[63] StopFake | Struggle against fake information about events in Ukraine

[64] FotoForensics

[65] „Google" vaizdai

minute video story in English outlines some tips and tricks on how to eliminate viral fake videos on social media. One of the tools featured in the video is Youtube DataViewer[66].

→ How to verify viral social media videos[67]

Topic – re cognition of trolls and bots

As the propaganda process moved into the online space, new forms of propaganda known as trolls and bots emerged. Their purpose is to influence election results, demoralize, discredit or isolate political opponents, participate in public opinion polls, and spread propaganda and false news.

How to recognize a troll?

- Spelling mistakes.
- Often a female user account.

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[66] Extract Meta Data (amnestyusa.org)
[67] How to verify viral social media videos - YouTube

- A small number of followers.

- Shares messages @ the name of a specific person.

- Claims to rely on alternative sources but does not indicate them.

- Comments or shares posts, messages only on a specific topic.

How to recognize a bot?

- Pay attention to the profile photo. These are usually drawings, images of nature, photos of politicians or celebrities, or profile photos are not uploaded. You can find the origin of a profile photo using Google Images Search.

- Long username. The username of many bots is unusual, with numbers or no meaning at all.

- Uncompetitive content or duplicate posts or messages. Bots are designed to dominate a particular topic or tag # on social networks. To achieve this, a message or post is shared many times.

- The user account is empty. Man-created user accounts contain a lot of personal information, bots - no or only basic information.

- Bots on social networks follow far more people than they have followers.

- Share many posts and messages. If a user is constantly sharing a lot of records, even at night, there is a great chance that it is a bot.

- Shares radical political content posts or messages. These are usually ideological clichés, patriotic, militaristic texts that run counter to prevailing values and attitudes.

- There are many stereotypical recordings in the user news stream, such as sentiments, videos with animals, and so on. Such content is used by bots during breaks between elections or other relevant events.

Given the way people interact with misinformation on social networks, it is recommended that more valuable digital tools would be adapted and tested in lessons:

- [Fakey (iu.edu)](#)[68] – this game aims to teach media literacy and explore how people interact with misinformation.

- [Botometer® by OSoMe (iu.edu)](#)[69] - The Botometer (formerly BotOrNot) checks the activity of your Twitter account and gives it a score. Higher scores mean more bot-like activities. Twitter authentication and permissions are required to use this service.

NINETH ADVICE:

DISCUSS AND DEBATE

In order for students to be resilient to fake news, strong knowledge and attitudes need to be developed. In the lessons, it is recommended not only to analyze examples and identify fake news during the implementation of the exercise, but also to constantly talk about the issues of fake news, discuss and debate.

Recommended methods for fueling the discussion:

1. The circle of knowledge.

2. Debate.

Method – the circle of the knowledge

This method teaches you to actively participate in the group discussion, not to deviate from the topic and delve into it. Discussions are of great importance in our lives, and in school, discussion promotes the development of personal intelligence. During the discussion, students learn very important skills: to listen, to combine information into a whole, to react to various thoughts, and then to form opinions and beliefs based on them. A good discussion is not a coincidence.

Steps for organizing and applying the method:

- Announcing the topic and purpose of the discussion.

- Grouping.

- A target-leading question is formulated.

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[68] [Fakey (iu.edu)](#)

[69] [Botometer® by OSoMe (iu.edu)](#)

● Discussion in small groups.

● Full class discussion.

● Discussion summary task. It is appropriate to assign a task to the students so that they can put into practice the knowledge gained during the discussion. Such a task could be: to write an article summarizing all the opinions expressed, to defend one's opinion, to prepare a group project, to conduct a research using an interview.

For the inspiration!

The following is a 4-minute video story in English about the application of the Socrates circle method, which allows students to deepen their understanding and develop a sense of community by engaging in the arguments of their peers.

→ [Scaffolding Discussion Skills With a Socratic Circle](#)[70]

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[70] [Scaffolding Discussion Skills With a Socratic Circle - YouTube](#)

Method - debate

The purpose of the debate is to convince the third, neutral group of judges, that your arguments are better than those of your opponents.

For the inspiration!

The following is a 12-minute video tutorial in English on how to apply the debate method.

→ Teaching Activity #7 Class debate.[71]
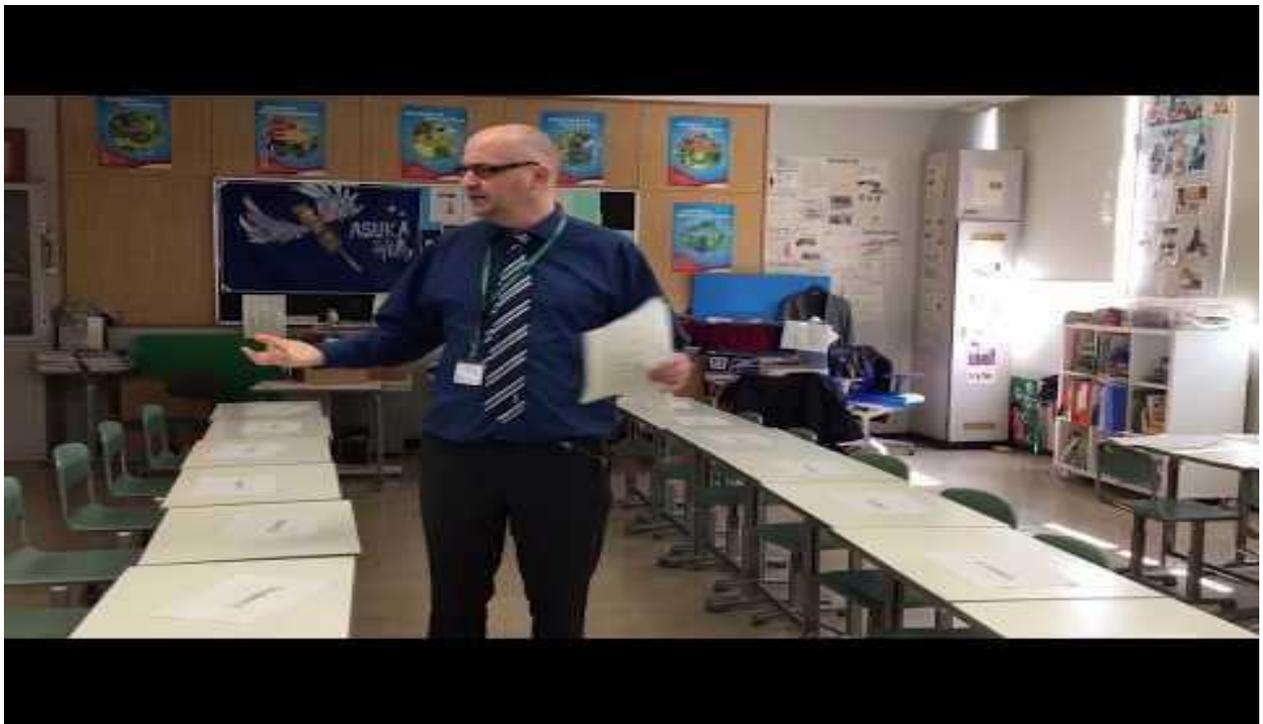
TENTH ADVICE:

EDUCATE WITH MOVIE

The authors of feature and documentary films often address the issues of manipulative content in the media. It is recommended to choose educational cinema to encourage deeper discussions with students. Here are some suggestions.

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[71] Teaching Activity #7 Class debate. - YouTube

First recommendation - Circle (2017 m.)

A social network is convenience or hidden danger? "Circle" offers a different perspective on the possibilities of technological progress.

→ CIRCLE (2017) movie trailer[72]
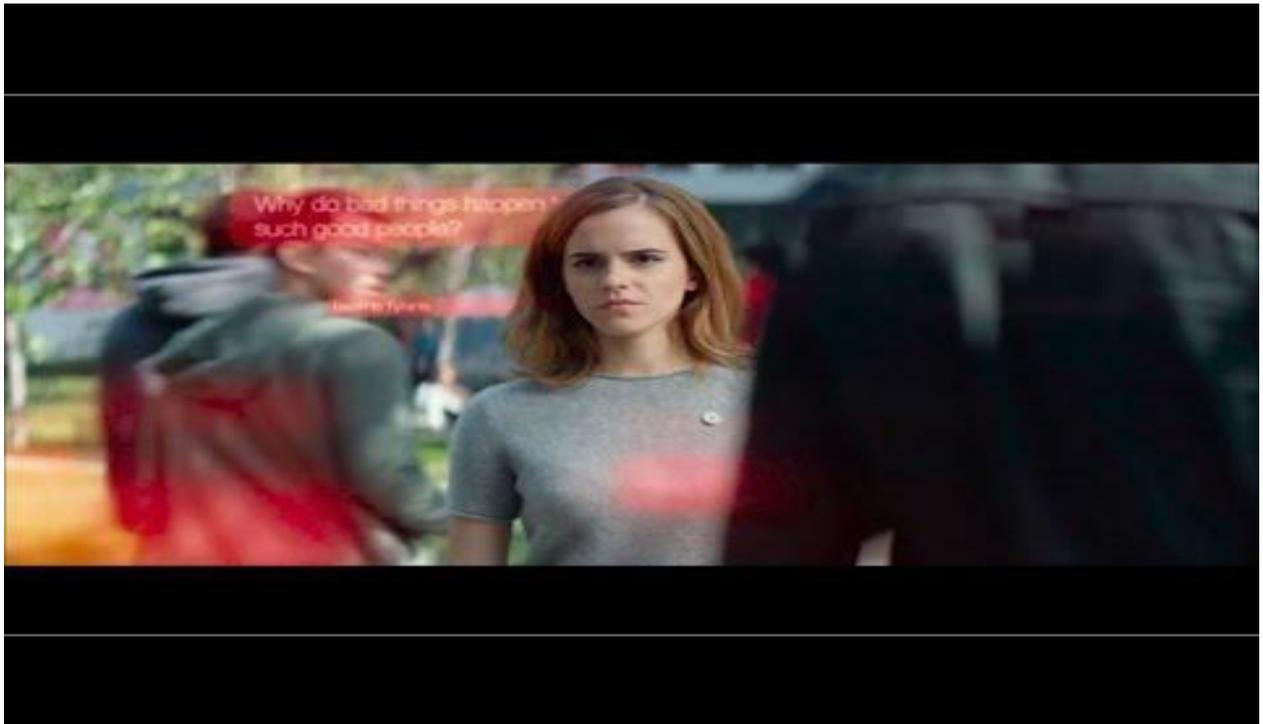
Second recommendation – Social dilemma (2020 m.)

The documentary explores the dangerous effects of social networks on people, while at the same time technology experts ring the alarm bells about their own creations.

→ The Social Dilemma | Official Trailer | Netflix[73]

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[72] RATAS (2017) filmo anonsas - YouTube
[73] The Social Dilemma | Official Trailer | Netflix - YouTube

INSTEAD OF CONCLUSION:

WHERE TO LOOK FOR THE INSPIRAION?

This manual is just a short guide to what to take while learning and teaching about fake news. Interested in the topic and searching for useful resources online, there are plenty of manuals, memos, and teaching aids designed to help put the theory into practice. We remind and recommend a few of them:

- **Media and information literacy. A practical training manual.** The manual has been translated into many EU languages using the funds in the EU countries, so it is worth looking at it not only in English but also in your native language. Media and information literacy A practical guidebook for trainers[74] will introduce you to useful tools for media and information literacy. The material is intended for teaching leaders and can be used by teachers as a source of information. Each topic in the publication is divided into easy-to-understand lessons that give students the opportunity to learn hands-on exercises, discussions, and games. Educators can follow the proposed curricula or select and adapt individual elements that they deem appropriate to the students. Lessons are given on how

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[74] https://www.dw.com/downloads/56736330/dwa-mil-guidebook-en-3rdedition.pdf

traditional media work, how information becomes new and how to distinguish whether information in the media is biased, comprehensive and reliable. Practical tips on how people can tell their stories using social media are provided.

● **Information kit for teachers. 10 types of information used in social networks.** 10 disinformation types in social media[75] is a training tool developed by the European Commission, available on the project's Check or Cheat[76] page in English, Greek, Spanish and Lithuanian.

● **Journalism, "Fake News" and Disinformation: A manual to Journalism Education and Training.** Journalism, 'Fake News' & Disinformation Handbook for Journalism Education and Training[77] - This new UNESCO publication is a timely resource and a very relevant topic for anyone practicing or teaching journalism in this digital age. The guide is available in different languages.

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[75] 10_DISINFORMATION_TYPES_Check_or_Cheat.pdf (checkorcheat.eu)

[76] Check or Cheat

[77] https://unesdoc.unesco.org/ark:/48223/pf0000265552_eng

DANGER OF DISINFORMATION AND FAKE NEWS

BUT AS WELL INCREASING CRITICAL THINKING

KAPADOKYA EĞİTİM VE ARAŞTIRMA DERNEĞİ

INTRODUCTION

The information age has brought a significant increase in available sources of information; this is in line with the unparalleled increase in internet availability and connection, in addition to the accessibility of technological devices [1]. People no longer rely on television and print media alone for obtaining news, but increasingly make use of social media and news apps. The variety of information sources that we have today has contributed to the spread of alternative facts [1]. With over 1.8 billion active users per month in 2016 [2], Facebook accounted for 20% of total traffic to reliable websites and up to 50% of all the traffic to fake news sites [3]. Twitter comes second to Facebook, with over 400 million active users per month [2]. Posts on social media platforms such as Facebook and Twitter spread rapidly due to how they attempt to grab the readers' attention as quickly as possible, with little substantive information provided, and thus create a breeding ground for the dissemination of fake news [4].

While social media is a convenient way of accessing news and staying connected to friends and family, it is not easy to distinguish real news from fake news on social media [5]. Social media continues to contribute to the increasing distribution of user-generated information; this includes hoaxes, false claims, fabricated news and conspiracy theories, with primary sources being social media platforms such as Facebook and Twitter [6]. This means that any person who is in possession of a device, which can connect to the internet, is potentially a consumer or distributor of fake news. While social media platforms and search engines do not encourage people to believe the information being circulated, they are complicit in people's propensity to believe the information they come across on these platforms, without determining their validity [6]. The spread of fake news can cause a multitude of damages to the subject; varying from reputational damage of an individual, to having an effect on the perceived value of a company [7].

WHAT IS FAKE NEWS?

Generally speaking, fake news is a false narrative that is published and promoted as if it were true. Historically, fake news was usually propaganda put out by those in power to create a certain belief or support a certain position, even if it was completely false.

Social media has now created an environment where anyone with an agenda can publish falsehoods as if they were truths. People can be paid to post fake news on behalf of someone else or automated programs, often called bots, can publish auto-generated fake news. The motivations as to why people create and distribute fake news are as numerous as there are individual opinions.

Why do we care about this issue of fake news? We all know people who are habitual liars or BS artists, how is this any different? First, the BSers we know are rarely trying to fool us deliberately, they are just bragging, cajoling, or flaunting their own insecurities. But the professionals creating fake news and cherry-picking information are very sophisticated, they are deliberately trying to fool or mislead you, and they have a clear but usually hidden agenda. Second, fake news is becoming dangerous to individuals, societies, and even international government relations. For example, in 2016 a man fired an automatic weapon in a pizzeria in New York that was the target of a fake-news conspiracy. In the same year a Pakistani minister was duped by a fake news story, causing him to threaten Isreal with nuclear war. One can't help but recognize the threats to democracy given the lies that spread rapidly on social media surrounding political campaigns, even including threats from foreign governments, voter misinformation, and disinformation about civic issues. Finally, the trend toward an increasing denial of science, the rise of opinion or alternate facts, and the removal of scientists from science positions in government, are directly threatening both the functioning and accountability of our governments but also the sustainability of our societies and planet.

THREE TYPES OF FAKE NEWS

Fake news is a broad term that encapsulates a few key ideas. Breaking the concept into specific terms helps us understand how it operates and causes harm. Claire Wardle, Ph.D. and Hossein Derakhshan **reframe fake news as information disorder**, a spectrum that ranges from falseness to intent to harm. Wardle and Derakhshan use a Venn diagram to explain information disorder as having three parts, including:

- **Misinformation:** Some spread false information without the intent to spread harm. People spreading misinformation believe it to be true before sharing it with others.

- **Disinformation:** People may spread information to cause harm or manipulate people. Disinformation describes actual lies that people tell for money, influence or to cause disorder.

- **Malinformation:** Information that may be true but is spread with malicious intent or taken out of context. Examples include divulging private information or manipulating facts to fit a false narrative.

THE DANGERS OF FAKE NEWS

Fake news, or information disorder, makes the truth hard to find, and can also be one of the leading sources of danger to personal security. Understanding the nuances of fake news can help us recognize it and mitigate harmful effects.

While some examples of fake news seem innocent or just an attempt at fun, a lot of fake news can be damaging, malicious and even dangerous.

Malinformation's dangers are blatant. For example, publishing a person's private address can put them at risk of physical danger. The potential dangers of misinformation and disinformation are more subtle.

Fake news is created to change people's beliefs, attitudes, or perceptions, so they will ultimately change their behavior. If you believe fake news, then someone else drives your beliefs and decisions. Also, in some parts of the world, there can be legal consequences for publishing and sharing fake news.

Misinformation and disinformation can also pose cyber security concerns. Fake news articles can be entry points for hackers attempting to steal your information. Understanding the risk of fake news and learning to recognize it is a way to **practice identity management** and protect your data. A cyber breach can compromise your virtual banking accounts, so look out for fake news to **grow your financial IQ** and establish fiscal security.

- How to Spot Fake News

So how do you protect yourself from fake news? The most effective way is to only trust something once you can verify it. In today's fast-paced world of social media, fake news surrounds us every day. If you are not careful, you run the risk of believing and acting upon it. Take the time to follow these basic steps to help ensure you make informed decisions based on facts.

- **Consider the Source:** Think about the actual source of the news. A local blog will not be as trustworthy as a major academic journal. What does the source stand for? What are their objectives?

- **Supporting Sources:** Look at the sources cited in the article. Are they themselves credible? Do they even exist?

- **Multiple Sources:** Don't just rely on a single article. The more you read from various sources, the more likely you can draw accurate conclusions. Also consider diverse sources and perspectives, for example, news from different countries or authors with different backgrounds.

- **Check the Author:** Who is the author? Research them to see if they are a credible author, their reputation in the community, whether they have a specific agenda, or if the person posting is a real person. Are they authoring within their field of expertise?

- **Check the Date:** Ensure the publication date is recent and not just an older story rehashed.

- **Comments:** Even if the article, video, or post is legitimate, be careful of comments posted in response. Quite often links or comments posted in response can be auto-generated by bots or by people hired to put out bad, confusing, or false information.

- **Check Your Biases:** Be objective. Could your own biases influence your response to the article? A problem that we humans often run into is that we only read sources that simply confirm what we already believe in. Challenge yourself by reading other sources you normally would not review.

- **Check the Funding:** Even legitimate publications have sponsors and advertisers who can influence an article or source. Check if someone funded the article and if so, find out who paid for it.

- **Repost carefully:** Fake news relies on believers to repost, retweet, or otherwise forward false information. If you're uncertain as to the authenticity of an article, think twice or hold off on sharing it with others.

In this lecture two general methods, one more simple and one more detailed, are presented to help detect and debunk fake news. Both methods have "critical thinking" (rational, logical thought) and the principles of science at their foundation. Why, exactly, must we rely on words to make arguments, and science to back them up?

A. Why arguments with words? How many people remember November 8th of 2016, the U.S. presidential election, where you were, how you felt, and how it has continued. Across the political spectrum, elections can galvanize people to heightened emotions and calls to action. For some, when their sense of right and wrong, justice and injustice, fair and unfair is assaulted, they may *feel* like taking physical action in return, and of course peaceful protests are one outlet. But as we have seen recently (and throughout history...), expressions of protest can devolve into violence or shouting matches rather than discussions using civil, rational arguments. Note that this need for rational arguments instead of fights applies to the most liberal of you in the audience and the most conservative of you in the audience, it cuts both ways. My job, the job of a university and a college education, is to prepare you to fight for what you believe in with words and arguments. And in this class specifically, we will prepare you to uncover the facts behind dominant issues in today's world such as climate change and environmental degradation, and all of the attending social and human consequences. But more than just teaching facts, our job is to help you understand how and why these are facts, and how and why science and the laws of nature operate and must be used in decision making and management in our governments and societies.

B. Why science? Why do we use science? Why does science get to be the arbiter of this debate over fact versus opinion, true versus false? Why not popular opinion, put it to a vote like in a democracy? Why not use economics to decide what is true or false - whatever increases profit the most is "true". The

reason we must use science is that its goal is to understand the how and why of any issue, relentlessly, and science forces itself to learn, to change direction, to re-evaluate, to test its assumptions and its methods and its conclusions, over and over again. While it is relatively easy in politics to promise everything but find excuses for not delivering before the next election, science is at the far end of that spectrum of accountability. Consider that Einstein is still being held accountable for his ideas and conclusions he published almost 120 years ago, especially if they are proven incorrect in new papers, and he's been dead since 1955.

In this context, how science operates is illustrated by this example: if everyone in class held out an apple and let go, the apple drops to the floor because of gravitational attraction with the Earth. And if every student in every class in every country in the world were to do the same thing, what would happen? The apple would drop to the floor, every time, and every time this is a **test** of our understanding, of our "law", of gravity. But what if we are on the international space station and drop an apple – it just sits there, maybe drifts around a bit. Does this falsify our law of gravity? How does science deal with this new result? Do we invent an alternative fact as evidence that gravity is still real? No, science does experiments and refines theory to show that the strength of gravity decreases with increasing distance between objects (the Earth and the apple), and thus far out in space the reduced *microgravity* is too small to move the apple. This "objective" approach (remember science has no agenda, it doesn't care what happens to the apple, just as long as we understand **why** it happened) to provide repeatable evidence for ideas and understanding, for information, is why science and critical thinking need to take the lead in detecting and debunking fake news.

- What to Do When You Encounter Fake News

Misinformation, disinformation and malinformation are prevalent in online circles, so how should we respond? The most frustrating part about fake news is that it's hard for one person to do anything about it. In many cases, an article with false or harmful information has done its damage by the time you see it. The best you can do is learn to recognize fake news so that it doesn't fool you or compromise your security. Promoting online media literacy in your personal and professional lives is also important.

When you see fake news, consider blocking the website or source spreading misinformation or malicious fake articles so that you don't see them in the future. If you see a friend or loved one share a fake news article, politely let them know. Navigating information disorder is tricky — the offender may double down if you approach them with hostility. The best way forward is always a civil conversation. The people in your life likely have good intentions, even when sharing fake news.

THE DANGERS OF DISINFORMATION

The danger of disinformation and other false news is evident in what happened at the U.S. Capitol on January 6, 2021. The Capitol was breached and occupied for hours. Rioters invaded the building, wreaking havoc when they entered the two Chambers and the offices of members of Congress. They carried Confederate flags and other symbols of hate and bias. They littered the building with broken glass, banners and used cigarettes; furniture and walls were left covered in blood. Members of Congress and the country were terrorized and remain anxious and frightened. There is a direct connection between this attack and the spread of disinformation. Disinformation about widespread voter fraud and election rigging had been spreading for weeks, months and years leading up to this day. On December 20, Trump tweeted:

"Statistically impossible to have lost the 2020 Election. Big protest in DC on January 6th. Be there, will be wild!".

- How to Check Whether News Is Real Or False

There are a variety of ways to assess whether news is real or false. Some strategies include: consider the source of the news; read beyond the headlines; double and triple check news sources and use a variety of reliable news sources regularly; use fact checking websites; reflect on your own confirmation bias (the tendency to interpret new evidence as confirmation of one's existing beliefs); and check whether the news is a joke or satirical news.

Age

10 and up

Questions to Start the Conversation

- What are your thoughts and feelings about what happened at the U.S Capitol on January 6?

- Did you know that people storming the Capitol believed Trump won the election? Why do they believe that?

- Do you know what false news is? Have you ever heard false news?

- How would you describe disinformation in your own words?

- How does disinformation relate to what happened on January 6?

Questions to Dig Deeper

(See the Additional Resources section for articles and information that address these questions.)

- Have you ever heard, believed or shared false news? How did you know or figure out it was false?

- How can you make sure you don't believe or spread disinformation?

- What do you think can be done about false news--as an individual and as a society?

Take Action

Ask: What can we do to help? What actions might make a difference?

- Help to organize a school forum (in person or virtually) to discuss different forms of false news, including disinformation and misinformation. Talk with students and staff about how to spot, assess and intervene when you see false news.

- Before posting on social media, make sure the information you share is real and accurate. Don't spread misinformation and report it when you see it. Share your thoughts, feelings and insights about disinformation with others.

- With friends and/or family, create a survey about false news. Share your results on social media, along with ideas of what can be done about it.

FAKE NEWS, INFORMATION LITERACY AND CRITICAL THINKING

This section discusses the history of fake news, the fake news that we know today and the role of information literacy can be used to help with the identification of fake news. It also provides a brief definition of critical thinking.

- The History of Fake News

Although fake news has received increased attention recently, the term has been used by scholars for many years [4]. Fake news emerged from the tradition of yellow journalism of the 1890s, which can be described as a reliance on the familiar aspects of sensationalism—crime news, scandal and gossip, divorces and sex, and stress upon the reporting of disasters, sports sensationalism as well as possibly satirical news [5]. The emergence of online news in the early 2000s raised concerns, among them being that people who share similar ideologies may form "echo chambers" where they can filter out alternative ideas [2]. This emergence came about as news media transformed from one that was dominated by newspapers printed by authentic and trusted journalists to one where online news from an untrusted source is believed by many [5]. The term later grew to describe "satirical news shows", "parody news shows" or "fake-news comedy shows" where a television show, or segment on a television show was dedicated to political satire [4]. Some of these include popular television shows such as The Daily Show (now with Trevor Noah), Saturday Night Live's "The Weekend Update" segment, and other similar shows such as Last Week Tonight with John Oliver and The Colbert Report with Stephen Colbert [4]. News stories in these shows were labelled "fake" not because of their content, but for parodying network news for the use of sarcasm, and using comedy as a tool to engage real public issues [4].

The term "Fake News" further became prominent during the course of the 2016 US presidential elections, as members of the opposing parties would post incorrect news headlines in order to sway the decision of voters [6].

- **Fake News Today**

The term fake news has a more literal meaning today [4]. The Macquarie Dictionary named fake news the word of the year for 2016 [8]. In this dictionary, fake news is described it as a word that captures a fascinating evolution in the creation of deceiving content, also allowing people to believe what they see fit. There are many definitions for the phrase, however, a concise description of the term can be found in Paskin [4] who states that certain news articles originating from either social media or mainstream (online or offline) platforms, that are not factual, but are presented as such and are not satirical, are considered fake news. In some instances, editorials, reports, and exposés may be knowingly disseminating information with intent to deceive for the purposes of monetary or political benefit [4].

A distinction amongst three types of fake news can be made on a conceptual level, namely: serious fabrications, hoaxes and satire [3]. Serious fabrications are explained as news items written on false information, including celebrity gossip. Hoaxes refer to false information provided via social media, aiming to be syndicated by traditional news platforms. Lastly, satire refers to the use of humour in the news to imitate real news, but through irony and absurdity. Some examples of famous satirical news platforms in circulation in the modern

day are The Onion and The Beaverton, when contrasted with real news publishers such as The New York Times [3].

Although there are many studies involving fake news and tools on how to detect it, there is a limited amount of academic work that focuses on the need to encourage information literacy so that people are able to critically access the information they have been presented, in order to make better informed

decisions [9].

Stein-Smith [5] urges that information/media literacy has become a more critical skill since the appearance of the notion of fake news has become public conversation. Information literacy is no longer a nice-to-have proficiency but a requirement for interpreting news headlines and participation in public discussions. It is essential for academic institutions of higher learning to present information literacy courses that will empower students and staff members with the prerequisite tools to identify, select, understand and use trustworthy information [1]. Outside of its academic uses, information literacy is also a lifelong skill with multiple applications in everyday life [5]. The choices people make in their lives, and opinions they form need to be informed by the appropriate interpretation of correct, opportune, and significant information [5].

- **Critical Thinking**

Critical thinking covers a broad range of skills that includes the following: verbal reasoning skills; argument analysis; thinking as hypothesis testing; dealing with likelihood and uncertainties; and decision making and problem solving skills [10]. For the purpose of this study, where we are concerned with the evaluation of the credibility of online news, the following definition will be used: critical thinking is "the ability to analyse and evaluate arguments according to their soundness and credibility, respond to arguments and reach conclusions through deduction from given information" [11]. In this study, we want to investigate how the skills mentioned by [11] can be used as part of information literacy, to better identify fake news.

With the large amount of news currently being published online, the ability to evaluate the credibility of online news has become essential. While there are many studies involving fake news and tools on how to detect it, there is a limited amount of work that focuses on the use of information literacy to assist people to critically access online information and news. Critical thinking, as a form of information literacy, provides a means to critically engage with online content, for example by looking for evidence to support claims and by evaluating the plausibility of arguments.

Few people question the important role of critical thinking in students becoming active citizens; however, the way science is taught in schools continues to be more oriented toward "what to think" rather than "how to think." Researchers understand critical thinking as a tool and a higher-order thinking skill necessary for being an active citizen when dealing with socio-scientific information and making decisions that affect human life, which the pandemic of COVID-19 provides many opportunities for. The outbreak of COVID-19 has been accompanied by what the World Health Organization (WHO) has described as a "massive infodemic." Fake news covering all aspects of the pandemic spread rapidly through social media, creating confusion and disinformation.

The COVID-19 pandemic is a global phenomenon that affects almost all spheres of our life, aside from its obvious direct impacts on human health and well-being. As mentioned by the UN Secretary General, in his call for solidarity, "We are facing a global health crisis unlike any in the 75-year history of the United Nations — one that is spreading human suffering, infecting the global economy and upending people's lives." [12]. COVID-19 has revealed the vulnerability of global systems' abilities to protect the environment, health and economy, making it urgent to provide a responsible response that involves collaboration between diverse social actors. For science education the pandemic has raised new and unthinkable challenges [13]; [14], which highlight the importance of critical thinking (CT) development in promoting responsible actions and responses to the coronavirus disease, which is the focus of this paper. Despite the general public's respect of science and scientific advances, denial movements – such as the ones that reject the use of vaccines and advocate for alternative health therapies – are increasing during this period [15]. The rapid global spread of the coronavirus disease has been accompanied by what the World Health Organization (WHO) has described as the COVID-19 social media infodemic. The term infodemic refers to an overabundance of information (real or not) associated with a specific topic, whose growth can occur exponentially in a short period of time [World Health Organization (WHO), 2020]. The case of the COVID-19 pandemic shows the crucial importance of socio-scientific instruction toward students' development of critical thinking (CT) for citizenship.

Critical thinking is embedded within the framework of "21st century skills" and is considered one of the goals of education [16]. Despite its importance, there is not a clear consensus on how to better promote CT in science instruction, and teachers often find it unclear what CT means and requires from them in their teaching practice [17]. CT is understood in this study as a set of skills and dispositions that enable students and people to take critical actions

based on reasons and values, but also as independent thinking [18]. It is also considered as a dialogic practice that students can enact and thereby become predisposed to practice [19]. We consider that CT has two fundamental roles in SSI instruction: one role linked to the promotion of rational arguments, cognitive skills and dispositions; and the other related to the idea of critical action and social activism, which is consistent with the characterization of CT provided by. Although research on SSIs has provided us with empirical evidence supporting the benefits of SSI instruction, particularly argumentation and students' motivation toward learning science, there is still scarce knowledge on how CT is articulated in these contexts. One challenge with promoting CT, especially in SSIs, is linked to new forms of communication that generate a rapid increase of information and easy access to it [20].

- **Analyzing News Sources**

 Think critically, and use these tips for analyzing news sources:

- Avoid websites that end in "lo" ex: Newslo. These sites take pieces of accurate information and then packaging that information with other false or misleading "facts" (sometimes for the purposes of satire or comedy).

- Watch out for websites that end in ".com.co" as they are often fake versions of real news sources.

- Watch out if known/reputable news sites are not also reporting on the story. Sometimes lack of coverage is the result of corporate media bias and other factors, but there should typically be more than one source reporting on a topic or event.

- Odd domain names generally equal odd and rarely truthful news.

- Lack of author attribution may, but not always, signify that the news story is suspect and requires verification.

- Some news organizations are also letting bloggers post under the banner of particular news brands; however, many of these posts do not go through the same editing process (ex: BuzzFeed Community Posts, Kinja blogs, Forbes blogs).

- Check the "About Us" tab on websites or look up the website on Snopes or Wikipedia for more information about the source.

- Bad web design and use of all caps can also be a sign that the source you're looking at should be verified and/or read in conjunction with other sources.

- If the story makes you really angry it's probably a good idea to keep reading about the topic via other sources to make sure the story you read wasn't purposefully trying to make you angry (with potentially misleading or false information) in order to generate shares and ad revenue.

- If the website you're reading encourages you to dox individuals (doxing is searching for and publishing private or identifying information about someone on the Internet, typically with malicious intent), it's unlikely to be a legitimate source of news.

- It's always best to read multiple sources of information to get a variety of viewpoints and media frames. Some sources not yet included in this list (although their practices at times may qualify them for addition), such as The Daily Kos, The Huffington Post, and Fox News, vacillate between providing important, legitimate, problematic, and/or hyperbolic news coverage, requiring readers and viewers to verify and contextualize information with other sources.

- **Fake News and the Value of Critical Thinking**

Modern life is a deluge of data. Research suggests that we receive daily 4,000-10,000 advertisements, on top of hundreds of emails, social media posts and messages in apps and countless other pieces of information from media, internet searches and personal interactions.

In this data deluge, never before has it been easier to find facts. At the same time, never before has it been easier to dress up untruths as fact. Deep fakes, the use of computer imaging technology to create false videos are a particularly nasty example, and the ubiquity of the term "fake news" hints that it is often hard to discern fact from fiction in our digital world.

We react to this data drenching by relying more on our emotions; the resonance of populist politics (that tend to simplify issues to basic emotional responses) speak to this trend. We also are using social media tools to simplify this morass of data, and most social media algorithms rely on the familiar to decide what to render to users. This means we are less exposed to alternative views in what some commentators have dubbed the "social media echo chamber".

The irony of our data flood, is that more data, the less we engage with an issue and use "fast thinking"; reflexive, simple, emotional and biased, instead

of "slow thinking", rational, complex, calculated and balanced. Populist politics and the echo chambers are just expressions of this changed engagement. To be clear, for many simple situations, fast thinking is workable. It just doesn't always work well on big or long term decisions, or when people tap into the biases that fast thinking is subject to, to exploit those biases.

Kahneman's slow thinking has another name: critical thinking. Critical thinking has been acknowledged as an antidote to fast thinking since the time of Socrates.

- **The Impact of Critical Thinking**

Critical thinking, like good football umpires, is noticed more in the absence than when it exists. Like bad umpires leading to bad games, if we don't have good critical thinking, we make poor decisions.

Over time poor decisions lead to slower economic growth, relationship deterioration and ultimately the possibility of disaster, if taken to extremes. Even if we don't notice our thinking styles, we sure notice the outcomes of them.

Even if we don't notice our thinking styles, we sure notice the outcomes of them.

As more and more of our life is dominated by data, apps, automated and artificial intelligence, we are lead to faster thinking styles which are more prone to these decision making errors.

Not only are our decisions likely to improve but some argue that who engage in critical thinking are likely to be less stressed, although it seems to me more likely that this relationship would be the other way around.

Even if this one doesn't work, the other benefit that the more critical thinking we do, the more our fast thinking systems uses its rules, so we even get a benefit when we don't explicitly use more contemplative thinking styles.

CRITICAL THINKING SKILLS

There are seven, they are:

- **Openness to other perspectives:** This quality allows us to understand that someone may know more than ourselves or be working to different assumptions.

- **Building common ground:** Without common ground, it's difficult to achieve a dialogue that identifies conflicting assumptions and alternative perspectives.

- **Emotional restraint and ethics:** When our emotions become inflamed, our vision narrows and fast thinking rules the world. The critical thinker keeps their vision wide when making a decision. An appropriate ethical framework keeps us from narrowing the success criteria of our decisions in a similar way.

- **Complex systems understanding:** Without understanding the context within which out decisions sit, it is impossible to articulate the influences of and consequences of our decisions.

- **Analytical skills:** Analytical skills involve identifying and questioning assumptions, and gathering and evaluating the evidence supporting each of those assumptions.

- **Problem solving and executive capacity:** Problem solving involves defining the problem, creatively developing potential solutions, evaluating them and deciding what to do. Executive capacity is the ability to organise resources and deliver the chosen solution.

- **Constructive dialogue:** the best thinking in the world is of limited value when extended only to the individual. Being able to articulate critical thinking to a wider audience through constructive massively increases its leverage.

So, if these critical thinking skills are so important, how do we develop them?

- **Five Strategies to Encourage Critical Thinking Skills in Your Classroom**

The importance of thinking critically is widely recognized in a broad range of curricula. It is, for example, given a position of central importance in the Common Core Standards and is represented as the compulsory subject *Theory of Knowledge* in the IB curriculum. It is also a part of the national curriculums of all the English-speaking world.

To move beyond the mere memorization of facts, students must possess the ability to critically assess the information they are exposed to not only to be adequately prepared for university, but for life beyond academia.

With the rapid pace of change in this technological age, it is essential that students develop skills that allow them to creatively adapt to working environments; the shape of which it is impossible for us to predict. Bringing critical thinking to the classroom helps students achieve all of this. Not to mention it's a lot of fun besides.

- **Critical Thinking Skills Activity 1. The Pro / Pro Chart**

Often during the prewriting for an argumentative essay, we teach our students to weigh up the pros and cons of the various arguments. *The Pro / Pro Chart* is a twist on this familiar process that encourages flexibility in our students' thinking.

However, instead of choosing between the two opposing poles, this approach encourages students to identify the positive aspects of the differing viewpoints, before merging these positive qualities into a third option containing the positive aspects of both.

Rather than focusing on the weaknesses of an opposing point of view, say as in a traditional debate, the Pro / Pro approach challenges students to dig down into the opposing viewpoint to find the merits that lie therein.

This can be undertaken as a whole class activity. Start by choosing what seems like a bad idea, say, for example, a restaurant without seats or a roof. Have students brainstorm how this could be a positive.

You may be surprised at some of the creative ideas you get back, such as faster turnover of customers, serving those in a hurry, starry views at night etc.

This activity teaches students the importance of not dismissing ideas out of hand without close examination. The tendency to disregard things that do not fit our expectations is very strong. This activity shows students that on closer examination we can often find merit in even the most ostensibly worthless of ideas.

- **Critical Thinking Skills Activity 2. Playing Devil's Advocate**

Similar to the activity above, *Playing Devil's Advocate* gives students the opportunity of seeing things from other perspectives. It involves students role-playing a point of view they are opposed to.

To start this activity off list a few controversial statements on the whiteboard suitable for your age group and demographic. Instruct the class to divide according to how they feel about the statement.

Those who are 'for' the statement go to one side of the room, those against go to the other side. Then, inform students that they will have 10 minutes to prepare arguments in support of the opposing view to the one they have expressed.

Students can either do this individually or collaborate in groups. This activity can also serve as a useful preparation activity for a later formal debate.

- **Critical Thinking Skills Activity 3. The Five Whys**

This straightforward activity is a super way to get students to think deeper; to really drill down to the root of a problem. It can be used with a broad range of problems too and involves simply asking "why?" – repeatedly! Think the annoying younger sibling constantly inquiring, "But, whyyyyyy!!"

Originally developed by the Toyota Motor Corporation to identify problems in production systems, *The Five Whys* is best illustrated by example.

First, think of a simple problem to investigate as a group. *The Five Whys* will help you drill down to the root cause of the problem and suggest a solution by working back to the cause through a series of effects.

For example,

Problem: Tony is always tired at school.

Why?

Reason: Because he doesn't get enough sleep.

Why?

Reason: He goes to bed too late in the evening.

Why?

Reason: He doesn't finish his homework until 11 pm.

Why?

Reason: He doesn't start it until 10 pm.

Why?

Reason: He watches TV all evening.

Solution: Tony should do homework before watching television.

This process can be applied to a wide variety of problems, whether practical or intellectual. The number of 'whys' is not fixed at 5 either, the question can be repeated and explored as often as is needed to get to the root cause of the problem and until a viable solution becomes apparent.

- **Critical Thinking Skills Activity 4. Desert Island Decisions**

This group activity engages the students' critical thinking faculties along with their problem-solving abilities.

It is based on the survival scenario of being marooned on a desert island after a shipwreck. The group can choose 5 items they are able to salvage from the wreckage to help them survive, or to secure their rescue. The number of items can be modified depending on time availability and group ability.

Students must discuss the relative merit of the different items suggested and negotiate with each other to get the list down to the set number of items. Some hard decisions are required to be made and this can often lead to very engaged and lively debates.

At the end of the activity period, the group can present their list to the class and compare their decisions with the decisions made by the other groups.

This activity lends itself to easy differentiation too. You can ask groups to not only list a certain number of items, but also to rank them in terms of importance. You can also change the environment which will throw up a host of new problems, for example, a plane crash in a tropical jungle.

- **Critical Thinking Skills Activity 5. Picture the Scene**

Text is not the only means of communicating information and so it is important students develop the ability to apply their critical faculties to the interpretation of imagery too.

In this activity, students view a photograph or picture projected on the whiteboard at the front of the room. They are then given a worksheet with the question "*What is happening in this image?*" written at the top.

After viewing the image closely for a few minutes, students answer this question in a sentence or two outlining what they believe to be happening.

In the next stage, the students answer the question, "*What lead you to your conclusion?*" Instruct them to write down the steps that led them to form their opinion. Tell them they must list all the evidence from the image that led them to their conclusion.

This activity helps students to think clearly about the steps they follow in forming their opinions. It encourages them to think about their own visceral responses to images by asking them to verbalize those responses.

It also reinforces the importance of basing opinions on evidence. This activity is easy to modify for different age and ability groups by choosing the image judiciously.

HOW CAN WE DEVELOP CRITICAL THINKING?

There are five ways in which we can develop critical thinking skills.

- **Parenting:** For those of us who are parents, the way in which we parent our children can allow us to infuse these skills in their day by day experience.

- **Education:** In a data rich world, it's no longer enough to teach facts; those facts are so readily available. Accordingly, critical thinking skills in terms of analyzing conflicting data sources and forming your own conclusions is really an important part of the educational agenda.

- **Workplace:** if we select, train and manage using critical thinking, we more critical thinkers we will produce in our workplace.

- **Mindfulness:** it's impossible to think critically unless we are living in the moment. Accordingly, mindfulness is a really important part of being able to think critically, especially in noisy and disrupted scenarios.

- **Respectful communication:** by practicing responsible communication including social media (ie no trolling) and encouraging people with different points of view, we will be able to be open to alternative perspectives and that will enable us collectively to come up with better ideas.

- **Expecting more from our public leaders:** Public leaders provide an example to follow. We should push back on any promotion of narrow, black and white portrayals of complex issues. These portrayal call to very raw emotions as they undermine our collective ability and willingness to think critically about issues that matter most.

With all these in mind, our ability to thinking critically across society can be achieved.

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HELPING INTEGRATE ISSUES INTO THE CURRICULUM OF DIFFERENT SUBJECTS

PGI D-R IVAN BOGORV

Integrate the topic of misinformation in the curriculum in various subjects

In nowadays digital world it is a real challenge to be independent and informed. The era of development of information and communication technologies and the Internet and their influence on all spheres of life has brought new opportunities for quick access to information and faster and easier communication between people around the world, allowing them to exchange knowledge and ideas. However, the development of technology has also allowed the manifestation of negative phenomena such as the emergence and spread of misinformation. In fact, few people are prepared to navigate effectively online. This deficit in digital media literacy has been identified as a critical factor in the widespread spread of false information online. Thus, the age of information turned out to be the age of misinformation.

False and misleading information is widespread online and young people do not have the skills and motivation to distinguish what is to be trusted. In order to build the next generation of informed citizens, it is necessary to teach Digital Media Literacy at school. Media literacy is defined as an opportunity to develop knowledge, values and a wide range of skills and competencies for critical thinking, communication and information management. Media literacy is important because it teaches how to acquire reliable information - the first and most important condition for making the right decision in any situation. It is related to critical thinking - how to use information, to find information from reliable sources, to question and verify all facts. Developing critical thinking skills that are useful in both the virtual and real world helps adolescents understand how these messages appear and what their goal is; to recognize misinformation and false suggestions, to take advantage of numerous sources of information in order to learn, educate and develop throughout life.

Media literacy remains underrepresented in schools and this makes it difficult to help young people feel confident in the modern information and media environment. That is why integration of the topic of misinformation in the entire curriculum becomes highly important as a means of teaching different subjects. It is important for adolescents to be media-literate in order to make the most of the media environment in which they live: to use it for creativity, collaboration, development, communication in a safe way to become sensible users and creators. The development of media literacy is an important and progressive strategy for educating thinking, engaged and informed citizens.

LESSON PLAN

School subject: Biology

Topic: Climate change

Lesson Objectives: Recognition of fake news by criteria for verifying media information.

Supporting concepts: fake news, misinformation, climate change

Materials: flipchart sheets and flipchart stand / whiteboard, markers, projector, computer, internet connection

Duration: 40 minutes

Activities: (described in the table bellow)

| Teacher's activity	Students activity
Introductory activity - 10 min.	
The teacher presents a series of images: _Application 1_ - publication suggesting that the rainforest was razed to the ground ten years later; _Application 2_ - publication presenting photographs of a glacier taken in 2008 and 2018; _Application 3_ - a publication showing an image showing a shark swimming freely along a highway in Houston. _Application 4_ - photograph showing a polar bear getting off a tram The teacher asks the students: What connects the presented photos?	Students quickly get familiar to the topic and note that deforestation, melting glaciers, floods, endangering the existence of some species is associated with global warming.
The teacher encourages students to remember the main causes and consequences of global warming.	Students list the main causes of global warming: greenhouse effect, burning fossil fuels, deforestation, decomposition of organic matter, natural gas extraction. They list the effects of global warming: climate change, melting

Encourages students to draw up a mind map of the causes and consequences of global warming. Encourages students to observe the publications and try to identify what information sources these photos were taken from. Asks questions to students: Since there are many media outlets that flood us with different information every day, have they thought about: which ones we choose and how they affect us, should we trust the publications. Teacher provokes tstudents to a discussion to determine whether the presented photographs were real and to share why they thought so. Directs them to pay attention to the source of information, the number of likes, shares.	glaciers and rising sea levels, increasing the acidity of the oceans, reducing biodiversity. Students compile a mind map of the causes and consequences of global warming. Quickly recognize posts - from social media Instagram, Twitter, Facebook. Students comment on the observed photos. There is a discussion.

Main activity (group work) – 30 min.	
Students are explained that there are websites that are independent platforms for verifying the facts that underlie news in the media, speeches and publications on social networks. The editors of the site choose the statements to check according to the relevance and public importance of each of the topics or their source. They also receive signals from users for verification. Students are explained and shown how to search for an image through <u>Google Images</u> , <u>Yandex</u> и <u>TinyEye</u> – by back-checking the image, uploading and uploading photos to sites to see if an image has been used many times.	The class is divided into 4 groups. Each team has the task to check the information about the respective publication. Following the teacher's instructions, the teams found that all the photos were in some way misinformation. To reach this conclusion, students study and read information from various sources (in English, they can also use Google Translate) and develop their skills in searching and analyzing information, as well as developing their language skills. Each team presents the real information they get by checking the images. They also use publications on independent fact-

	finding platforms. (See For Application 1,2,3,4)
Closing activity - 5 min.	
Conducts a discussion, asking guiding questions: Has your opinion of reliable information changed? Where to look for reliable information? How to check the authenticity?	Students actively participate in the discussion, give answers to questions.

The teacher shows the following publications and photographs:

Application 1

A publication suggesting that the rainforest was razed to the ground ten years later.
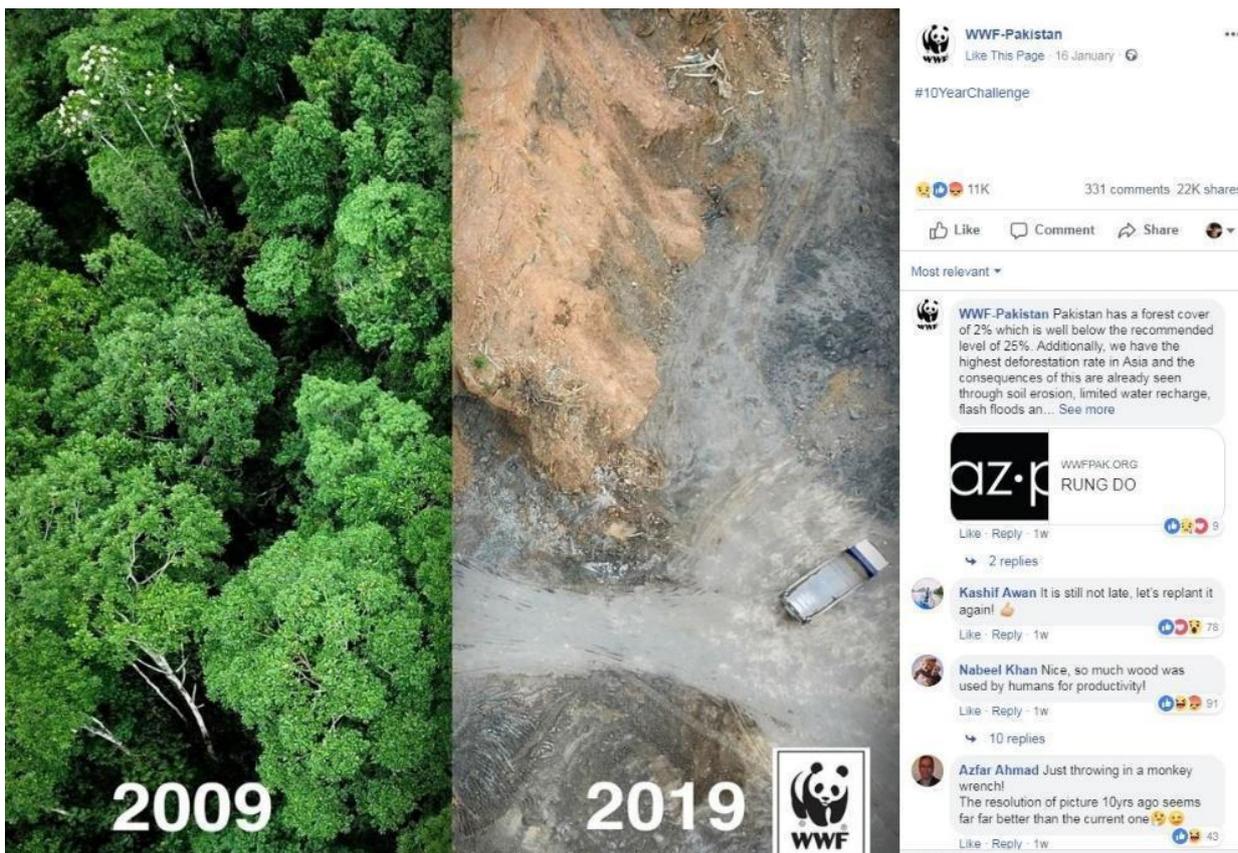
Application 2

Publication comparing photos of a glacier taken in 2008 and 2018.

Application 3

Publication of a photograph showing a shark swimming freely along a highway in Houston.

Application 4

Photograph of a polar bear getting off a tram in Russia

Students access the following information:

About Application 1

The publication was shared on Facebook by the World Wildlife Fund (WWF) - Pakistan - a leading environmental organization worldwide with many social media platforms and hundreds of thousands of followers. The publication attracts thousands of comments and reactions, there are more than 200,000 shares. Users comment that the image does not represent what is suggested in the dates. It is marked with the hashtag # 10yearschallenge. In fact, WWF shared the collage of the two photos to disprove this post.

About #10yearschallenge: In early 2019, a stranger challenged on Facebook: "How Hard Did Aging Hit You Challenge". Users are starting to compare their first Facebook profile picture with their current one. Then they started sharing photos published in 2009 and 2019. The challenge, which conquered celebrities and anonymous people who published "before" and "after" photos, was transferred to all social networks. A new comparison of quite instructive photos is entering: the impact of climate change on the environment in 10 years - a trend launched by environmentalists to make as many people as possible aware of respect for the planet.

Search engine reversal Google finds the original image in the images of [Shutterstock Deforestation Aerial Photo Rainforest Jungle Borneo Stock Photo (Edit Now) 1098811376 (shutterstock.com)](#) , attributed to photographer Richard Carey, and a video https://www.shutterstock.com/video/clip-1011529625-deforestation-rainforest-borneo-malaysia-destroyed-palm-oil

Three different features in the collage, shared by WWF and surrounded by red below, prove that this is the same photo taken by Kerry.

The photographer told AFP that he took the photo in May 2018 near the town of Kuching in Malaysia. He says the image is of a section of forest that is being cleared to make way for a palm oil factory. "Deforestation is certainly a big problem there, much of the rainforest has been destroyed in recent years, but this particular picture doesn't show it," Kerry said.

Students following the teacher's instructions find that in fact the comparison in the publication from [January 16, 2019](#) , titled # 10yearchallenge, is misleading.

Screenshot of tropical forests uploaded online by WWF

Screenshot of the image taken by photographer Richard Carey

About Application 2

The Instagram post presents a comparison of photos of a glacier taken in 2008 and 2018. The number of likes is impressive - over 75,000. And the person who published the post is a famous French actor with many followers. The photo comparison is also part of the # 10yearschallenge - "before" and "after" 10 years.

After checking the facts, the students found that in fact the two photographs of the glacier and the rest of it after 10 years, reflecting the impact of climate change on the environment are real. In fact, a reverse search of Google images leads to the real photos - the first photo was taken on November 5, 2016 (and not in 2008), in Antarctica - by NASA's IceBridge research aircraft, by sea ice scientist Jeremy Harbeck "The Goetz Ice Shelf in West Antarctica". The second frame was taken in August 2018 by a representative of The National Snow and Ice Data Center (NSIDC) ... in the Arctic. So not only are the photos not 10 years apart, but they are from opposite ends of the globe! Therefore, they do not show the evolution of the same ice formation in the last decade. And they do not provide factual evidence of the phenomenon, according to AFP and Radio Canada, without denying the reality of climate change and melting ice.

Screenshot of the glaciers uploaded online by AFP and a comment denying the truth of the information

Students came to the information that AFP reached the author of the first tweet, which accumulated about 360,000 re-shares. After questioning, the latter explained that he acted with an artistic approach: "I took two glaciers that can clearly show that there have been changes in 10 years (...) Often misinformation is negative, but in this case it is for a cause that I it seems noble. " The problem of melting glaciers due to climate change is real and worrying. The idea of comparison is good, but we can't create fake news and then post misleadingly identified photos ourselves. This is misinformation, regardless of intention!

About Application 3

The Twitter post, which features a photo of a shark swimming freely along a highway in Houston, Texas after Hurricane Harvey, is by a blogger named Jason Michael, and his tweet has been shared by more than 75,000 and has more than 120,000 likes (probably on users who think the photo is real). There is definitely interest in the image, as only two hours later the shares and likes increase significantly (see the photo below).

The students follow the teacher's instructions and discover that the image of the shark swimming across the flooded highway is in fact false. The image, which is said to document a shark swimming on a highway flooded by heavy rains, was initially released after Hurricane Irene hit the Caribbean island of Puerto Rico in August 2011. Since then, the same image has been circulating. online several times, usually located in a major city in the United States that has just suffered a hurricane or other weather event causing heavy rains and floods. His latest iterations / interpretations attribute him to Hurricane Patricia after torrential rains hit parts of Texas in 2015, Hurricane Matthew near Florida in October 2016, and Hurricane Harvey, which caused massive flooding throughout Houston in August 2017.

In fact, the image of the shark was taken from a September 2005 photo of Africa Geographic on a kayak chased by a great white shark and added to a photo of a flooded street. The photo is taken from an article http://www.whitesharktrust.org/pages/mediaarticle/media25.html , entitled "Shark Detectives" and is for researchers studying great white sharks off the coast of South Africa, describing even the circumstances in which this picture was taken.
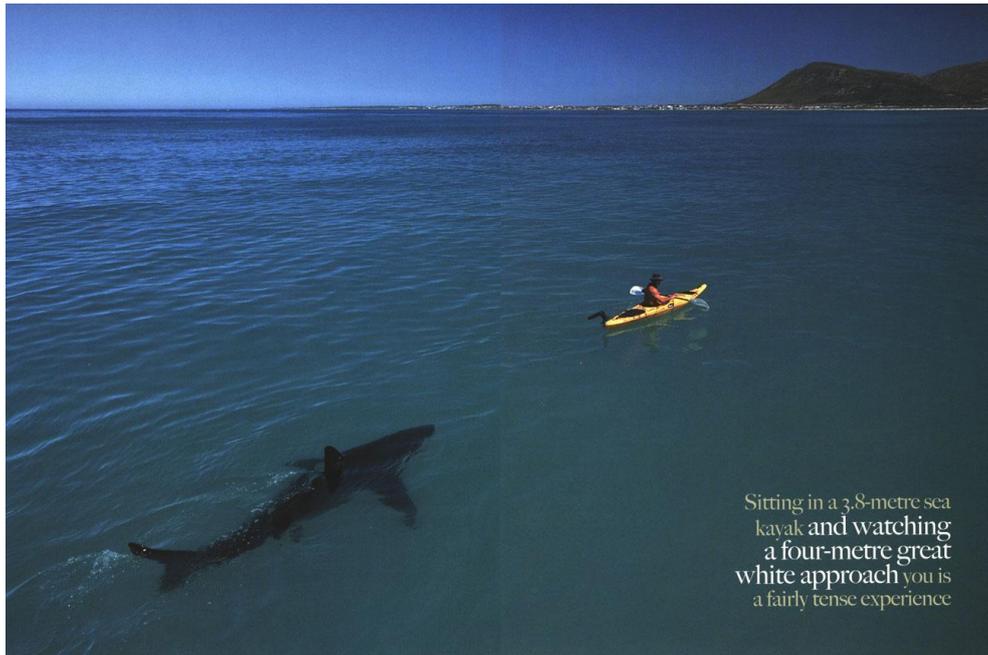
Screenshot of the image published in Africa Geographic by photographer Thomas Peechak

Screenshot of the image posted on Twitter by a blogger

The image of the floating shark on the flooded highway is a compilation of two other photos and is a digital scam!

About Application 4

This photo can be seen with a title similar to this ("Polar Express" or "Typical Day in Russia") on the Internet. It is said to depict a real polar bear getting off a tram somewhere in Russia. It turns out that the photo is absolutely real - it was taken in the Czech city of Brno and has not been edited. But the bear is not real - it is a suit worn by two Greenpeace activists. This "bear" is part of the "Save the Arctic" campaign and is "touring" European cities to draw attention to the problems in the Arctic caused by excessive oil production and fishing.

Developed by: Stoyna Ilieva, teacher of biology and chemistry

LESSON PLAN

1. School subject: Information Technologies

2. Topic: Information. Evaluate the validity and reliability of information

3. Lesson Objectives:

3.1.   Educational objectives:

- students acquire knowledge about information as an object, its characteristics, information retrieval and types of information sources;

- formation of students' interest in information technology and motivation for their study. Further development of qualities such as logical thinking, critical perception of information, responsibility in disseminating information, respect for intellectual property;

3.2.   Practical and applied objectives:

application of knowledge, acquired in everyday-work in a digital environment - search and evaluation of the found information, in the creation and dissemination of content on social networks, etc.

4. Supporting concepts: information, knowledge, data, source, fact, fake.

5. Materials: computer laboratory with a workplace with Internet access for each student, multimedia projector; whiteboard, colored markers; presentation, notebooks; lesson plan-summary

6. Duration: 40 minutes

7. Activities: (described in the table below)

Teacher's activity	Students' activity
Introductory activity - 5 min.	
The teacher announces the topic and objectives of the lesson. The teacher asks the students: Have you heard the term "Information War"? Explains the importance and power of information today.	Students write the topic of the lesson in their notebooks. Students participate in the discussion.
Main activity - 30 min	
The concept of "Information" is introduced and the differences between data, information and	Listen to the teacher's explanations and watch the presentation.

knowledge are explained. The presentation *IT 10 - VALIDITY OF INFORMATION .pptx* is used. The characteristics of the information are described: usefulness, objectivity, accuracy, topicality, directionality, format, interactivity, security, reliability, optimality, sustainability, completeness, sufficiency, source of information, quality of information, uniqueness, verifiability of information. Students write the characteristics of the information in their notebooks. The meaning of "misinformation" and the more popular term "fake" among students is announced. The focus is on the threats caused by fake news.	Answer the questions asked.
Closing activity - 5 min.	
Teacher sets homework: Share your experience with misinformation / fake news. In the form of an essay, comic, presentation, or other form you prefer, describe a real-life event in which you participated directly or were told by your relatives or friends. Did this situation make you more cautious?	They write down the conditions of homework in their notebooks.

Methodological notes:

Introductory activity:

Question: **Have you heard the term "Information War"?**

Information warfare is the use or use of information and communication technologies in search of an advantage over an opponent. Very often this is an impact on the civilian population and / or the military on the other hand, by disseminating certain information in the form of propaganda or misinformation in order to demoralize the enemy.

Main activity:

Question: **What does the term Information mean?**

There is no single definition of the term because there is a wide range of meanings in different areas of human knowledge.

Information is available, usable knowledge. The information is extracted from data.

Data are unstructured facts about an object that are stored without being used. If the need arises, this data is used (processed) and then converted into information.

The data represent real-world characteristics. The data has no value of its own. Their value depends entirely on how well they represent the real world. The ultimate goal of the data is to provide useful and accurate information.

Data can be processed by computers, individuals and / or organizations, but their viability depends on a person's ability to use them in practice.

From a technical point of view, data are individual facts collected and reflecting a relevant subject area, which are used as materials for building information and knowledge.

Information is what one understands about reality, and this is data in a more useful form. Information is obtained only when the data is organized for a specific purpose.

Knowledge is the ability of a person to change reality using information. Knowledge is what is understood as a result of perception, learning and thinking.

Question: **What characteristics do you think information has?**

Characteristics of the information:

Usefulness - Information is useful only when it is really needed.

Objectivity - Information must reflect the objective reality and not be influenced by subjective factors.

Accuracy - Information should be as accurate as necessary. Inaccuracy of information within certain limits is allowed.

Up-to-dateness - Information must be submitted within the time interval in which it is useful.

Targeting - Should be aimed at the one to whom it refers.

Format - Different formats of information are possible, including graphs, charts, maps, etc. The format of the information must be in accordance with the cognitive style of the recipient.

Interactivity - Ability for the user to gradually, step by step retrieve information needed.

Safety - It is important to ensure levels of access to information, as well as control over who and when sought information

Authenticity - Information should be verified for authenticity using various sources, etc.

Optimality - The information should not contain excess. It leads to an information crisis.

Sustainability - Reflects the ability of information to respond to change.

Completeness - The ratio between available and available information

Sufficiency - Ability to achieve goals with available available information.

Source of information - Identifies the origin of information. It is inextricably linked to the range parameter.

Quality of information - Defines the properties that reflect the degree of suitability of information to achieve a goal.

Uniqueness of information - Information in a single copy.

Verifiability of information - Availability of the source to confirm the veracity of the information.

Closing activity:

Once you know some of the characteristics of the information:

Question: **What is misinformation?**

Wrong or inaccurate information that is intentionally disseminated. It may include the distribution of forged documents, manuscripts and photographs, or the spread of malicious rumors. In addition, misinformation involves distorting accurate information in such a way as to render it useless.

Question: **What is a fake?**

Deliberate dissemination of false rumors or false information in order to mislead the audience, the authors of which receive financial or political benefits. The goal may be to increase website traffic, viewership or listenership to television or radio broadcasts and, accordingly, to realize profits from advertising, etc. They often use eye-catching headlines or entirely fictional

news stories to increase readability and sharing. It is similarly earned on clickbait and relies on advertising revenue, regardless of the veracity of the published article. Easy access to advertising revenue, increasing political tensions and the popularity of social media.

Fact - a term used as a synonym for truth that can be proven scientifically or logically. A fact is a result or an event that actually happened and whose existence it is.

The presentation and the video lesson „What Is Fake News?" https://www.youtube.com/watch?v=V4o0B6IDo50 are used

Developed by: Petrana Hadjitodeva, teacher of practical training

FAKE NEWS
IN SOME SCHOOL SUBJECTS

ABARKA

1. **SPANISH LANGUAGE.**

A. **THE RAE[78] INCLUDES COCRETA, ALMONDIGA AND MURCIÉGALO IN THE DICTIONARY**

From time to time the idea is spread that the RAE accepts vulgarisms such as cocreta, almóndiga or murciégalo and not others of more common use in our times. But the truth is that each case is different:

The word cocreta has never been found in any academic dictionary.

The word almóndiga appears in the academic dictionary since 1726. In the last edition it appears with the marks of vulgar and in disuse.

The term murciégalo, as with almóndiga, appears with the marks of used as vulgar and in disuse. However, murciégalo is the etymological form of murciélago, as it comes from the Latin mus caeculus 'blind mouse'. The term murciélago, more used today, is an example of metathesis, that is, the change of sounds within a word, as occurs with crocodilo and crocodrilo, both present in the DLE[79].

B. **THE BAKERS GUILD ASKS THE RAE TO ELIMINATE THE SAYING PAN CON PAN (BREAD WITH BREAD), COMIDA DE TONTOS (FOOL'S FOOD) FROM THE DICTIONARY.**

A few months ago it was published that the Bakers Guild had launched a campaign against the RAE to eliminate the saying bread with bread, fool's food, claiming that such paremia is denigrating for the baker's profession and that, therefore, both the RAE and the Instituto Cervantes had to eliminate that saying from the Spanish language. In fact, there is a website where this campaign is presented: www.elpannoescomidadetontos.com.

Be that as it may, neither the RAE nor the Instituto Cervantes have the power to decide whether a word, expression or saying is eliminated from the Spanish language. Furthermore, the petition —or publicity campaign— made no sense whatsoever, since the RAE neither includes proverbs in its works nor does it have any intended for paremiology.

C. **THE RAE PROHIBITS THE USE OF EVERYONE AND ALL**

Another hoax related to the Academy is the prohibition of using gender splitting. The RAE has not prohibited its use, nor has it censored the use of the @ sign or other alternatives to avoid the so-called linguistic sexism.

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[78] RAE = Real Academia Española (Spanish Language Official Federation).

[79] DEL = Diccionario de la Lengua Española (Spanish Language Dictionnary)

The Academy advises and recommends the use of the generic masculine as an unmarked term in the masculine / feminine opposition, but does not prescribe it, so that it cannot be said that the RAE prohibits or censors the use of duplication (although it is better in the headline).

D. THE SPANISH LANGUAGE WILL BE CONSIDERED A FOREIGN LANGUAGE IN THE BASQUE COUNTRY

From various media, known especially for the lack of quality of their content, the news was spread that Spanish would become a foreign language in the Basque Country, as the BOE[80] had published a resolution specifying the following:

*Resolution of December 17, 2018, of the Cervantes Institute, which publishes the Agreement with the University of the Basque Country/Euskal Herriko Unibersitatea, for the training of teachers in the field of **teaching Spanish as a foreign language**.*

The phrase "Spanish as a foreign language" is the one that set off the alarms. Those who interpreted it as an example of an unconstitutional situation - specifically, against article 3, which specifies that Spanish is the official language of the State - surely do not know that Spanish as a foreign language, also known as ELE[81], focuses on learning the Spanish language as a second or foreign language. In fact, there are numerous master's degrees in ELE at Spanish universities to train teachers to teach Spanish to students whose mother tongue is not Spanish.

E. THIS WORD IS NOT IN THE DICTIONARY, THEREFORE IT IS NOT CORRECT

It is obvious that in practice many people tend to say that words do not exist, quite simply because these words are not part of their vocabulary.

It is necessary to approach the translation or the interpreting to understand that according to the cultures and countries, the linguistic vocabulary used can be different. Also many words come with different meanings which very often are not all used.

For example, in Spanish, verb forms are not included - only the infinitive form - but this does not imply that it is incorrect to say saltaba, correría o hubiera (jump, run or would). Neither do dictionaries include the proper names of

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[80] BOE = Boletín Oficial del Estado (State official newsletter)

[81] ELE = español como Lengua Extranjera (Spanish as Foreign Language)

person or place, without this being incorrect to call someone by his name or refer to the name of a city, a river or a country.

Some fake news have pointed out that the term "usabilidad" is incorrect because it is not in the dictionary. Again, the fact that it is not in the academic dictionary does not mean that its use is not correct, since it is a word adapted from English usability whose meaning may be "quality of usable".

2. **ECONOMY**

https://www.elsaltodiario.com/elecciones/bulos-y-mantras-economia-liberal-de-right-political-parties-vox-pp-citizens (Clarifying Fake News)

F. **THE INCREASE IN THE MINIMUM WAGE TO 900 EUROS WILL SINK THE ECONOMY!**

https://www.elmundo.es/economia/2018/10/21/5bcb43df468aebda538b45b4.html (Fake news)

In fact, not many people charge it because there are not many companies that pay the SMI. Most must pay the minimum wages established by sectoral agreements. Only sectors without an agreement or in which the salary tables are equal to the SMI pay that legal minimum. According to data from the Independent Authority for Fiscal Responsibility (AIREF), this increase will affect 1.2 million people, 6.2% of all wage earners, who had their salary between the previous minimum and the current one, increasing the wage bill at 700 million euros.

But beyond dismantling that this increase could affect those companies that supposedly are not capable of generating some 200 euros more profit per worker, what we cannot believe in an economy like the Spanish one is that it could affect as much as they try to show.

G. **INHERITANCE TAX AFFECTS US ALL!**

https://www.libremercado.com/2018-09-10/el-caso-de-los-pacheco-hermanos-perder-toda-una-inherencia-y-seguir-debendo-a-la-junta-de-andalucia-1276624571/ (Fake news)

In Andalusia they have already achieved it. They have moved through news networks in which a poor manhe went bankrupt by not being able to pay the inheritance taxof the hotel that his father left him, without explaining that

the business carried an enormous debt and was the real cause of its ruin, and they have convinced a large part of the population that it is an evil tax.

H. FEMINISTS LIVE ON GRANTS

https://www.libremercado.com/2019-03-07/the-feminist-bar-bar-enters-150-million-euros-through-16000-public-subsidies-1276634295/ (Fake news)

To think that the hundreds of thousands of women who took to the streets in the feminist strike on March 8 "live on subsidies" is already a false statement that not even the most uninformed of voters could believe. But even so, that mantra resonates in social networks of certain political parties that affirm it without any shame.

I. THE PENSION SYSTEM IS UNSUSTAINABLE

https://www.europapress.es/economia/laboral-00346/noticia-insustainable-pension-system-pandemic-accelerate-reform-eae-business-school-20200715115035.html (Fake news)

It is true that the current pension system is in danger due to the increased burden on the General State Budget due to various factors related to the mechanization of work or the aging of the population. What is false is that there are no solutions beyond freezing pensions, raising income taxes or increasing the birth rate.

J. THE RENTAL MARKET WILL REGULATE ITSELF!

https://www.eleconomista.es/economia/noticias/11114840/03/21/La-regulacion-del-alquiler-destruye-la-oferta-y-apenas-incide-en-el-precio.html

(Fake news)

The arguments against the regulation are various, but all equally false or with the aim of protecting large owners, investment funds and the real estate industry in general.

3. ANTHROPOLOGY

K. LIE FROM A JOURNALIST

A journalist from The Sun invented that she traveled as a refugee to Syria, and arrived from Turkey to Paris in six days, skipping all kinds of controls.

https://www.clasesdeperiodismo.com/2015/12/07/the-sun-eliminates-history-of-reporter-for-inexact-affirmations/

L. NAZI TRAIN FOUND IN POLAND WITH HIDDEN TREASURE

Nazi train found in Poland with hidden treasure. It reached serious media around the world.

https://www.abc.es/internacional/20150826/abci-tren-nazi-encontrado-201508261959.html

4. SOCIOLOGY

M. FRAUDULENT VOTES IN FAVOR OF CLINTON IN AN OHIO WAREHOUSE

Information appears about the discovery of thousands of fraudulent votes in favor of Clinton in an Ohio warehouse. They were in sealed ballot boxes and were counted along with the legal ones. One of the websites that spread the news reached 6.1 million readers, according to Crowdtangle and collected by CNN.

https://www.diarioregistrado.com/internacionales/a-young-person-created-una-noticia-fasa-sobre-hillary-clinton-que-se-viralizo-y-gano-22-mil-dolares_a5880f43a5a4d1c84103b5b4b

N. TRUMP WILL OFFER FREE ONE-WAY PLANE TICKETS

Tmzhiphop.com: Trump will offer free one-way plane tickets to Africa and Mexico for those who want to leave the US. On Facebook, 800,000 hits. It was fake.

https://www.12minutos.com/5bffa65a8b005/trump-ofrecera-tickets-de-avion-gratis-de-ida-a-africa-y-mexico-para-quienes-quieran-abandonar-euuu.html

O. LA HUELGA A LA JAPONESA

La huelga a la japonesa or Japanese-style strike is a widespread urban legend in Spain and some Latin American countries. According to this, the employees who practice the Japanese-style strike would work more than usual,

using this increase in productivity as a means of pressure. In fact, this type of strike does not take place in Japan, where conventional strikes or work-to-rule strikes are more frequent.

https://www.challenges.fr/economie/japon-zero-greve-zero-manif-comment-font-ils_10919

5. ETHICS

P. US PRESIDENT BARACK OBAMA HAD BANNED THE PLEDGE OF ALLEGIANCE IN SCHOOLS.

The website Abcnews.com.co (no longer exists) reported that US President Barack Obama had banned the Pledge of Allegiance in schools. It was fake. But the name of the page, very credible, confused the population.

6. BASQUE LANGUAGE

Q. "BASQUE AS A LANGUAGE LOVED BY THE BASQUES"

Fake because, In 2018, for example, Basques could take the driving test in Basque and less than 2% chose it. In percentages, the choice of Basque did not reach 4% of people. In Guipúzcoa, the most Basque-speaking province, it was 3.95%; in Vizcaya, the most populated province, 1.12%; and in Álava, the smallest and least Euskalduna, 0.12%.

https://www.actuall.com/criterio/democracia/la-fake-news-del-euskera-lengua-amada-los-vascos/

R. "THE BASQUE GOVERNMENT SPENT 2.1 BILLION EUROS BETWEEN 1983 AND 2014 TO PROMOTE BASQUE AND MAKE BASQUE SOCIETY BILINGUAL"

Not true because then the statistics are not showing the same nowadays. The sociolinguistic survey on the use of languages carried out by the Basque Government in 2017 showed that the percentage of use of Spanish in the capitals exceeded 90% in Pamplona (93.9%), Bilbao (93.6%) and Vitoria (92 ,5%); in San Sebastian it dropped to 80.5%. And in Bayonne, the percentage of conversations in French was 91.4%. For years, the exam for the EGA title, which

opens the doors of the Basque Administrations, has only been approved by around 25% of those presented.

https://www.actuall.com/criterio/democracia/la-fake-news-del-euskera-lengua-amada-los-vascos/

s. **"BASQUE AND POST-TRUTH"**

In an online newspaper called DiarriodeNavarra, PABLO URIZ URZAINQUI published an article talking about the fake news on basque language which said Euskera is the most spoken language in Navarra.

He said this : "...They say that in the Valley of Roncal a beautiful and rich Basque was spoken that unfortunately was lost about a century ago -my maternal grandmother, in 1885, was born in Garde (one of the seven villages of Roncal), where she always lived... and did not speak Basque-. In recent decades, through education, unified Basque has been gradually introduced and, probably in a few years and due to the will of the people of Roncal, it will be the dominant language. But today the majority and common language is Spanish, so the mural painted in Burgui, exclusively in Basque, does not fit the linguistic reality of the Valley, idiomatically framed in the "mixed zone"..."

https://www.diariodenavarra.es/contenidos/participacion/cartasaldirector/2018/06/15/euskera-posverdad.html

7. MATHEMATIC

T. "X² – 2999X + 2248541 PRODUCES 80 PRIMES FROM X = 1460 TO 1539".

This news appeared on April 7, 2021 on the @AlgebraFact Twitter account. Ignacio Mantilla Prada did a small comparative exercise and development to show that this information, even not fake at all, kept a lot of information away from readers who could be considered as fake.

Yes, there are 80 primes that are generated with that polynomial, but they are the same 40 that the Euler polynomial generates, repeated:

1601, 1523, 1447, …, 47, 43, 41, 41, 43, 47, …, 1447, 1523, 1601.

But this is also nothing special, since it can be seen that, in that sense, a polynomial like Euler's, even simpler than the one announced (changing two signs):

Q(n) = n²-n-41 also returns the same 80 primes, just take values of n between -39 and 40. And it is easy to build all the polynomials you want with this same virtue, just change n by (n-a) in the Euler polynomial for some number a ≥ 1, for example, with a = 40 we get:

R(n) = n²-79n+1601 which returns the same 80 prime numbers when n takes values from 0 to 79. Therefore, the polynomial cited in the mentioned trine is just one, obtained by choosing a = 1500, of the infinities that, as already said, we can find with this property.

https://blogs.elespectador.com/actualidad/ecuaciones-de-opinion/matematicas-tambien-noticias-falsas

8. PHYSICS AND CHEMISTRY

U. EATING PAPAYA CAN HELP YOU PREVENT CANCER

You do not eat fruits and vegetables. You are at risk of cancer, Eating papaya can help you prevent cancer, Having a positive attitude helps you overcome cancer. These are some of the national and international news titles that any Internet user can come across on the internet.

The problem is that none of this news is scientifically based, and yet it can lead people to false hopes of a treatment or a cure.

https://www.fisica.unam.mx/es/noticias.php?id=1979

V. A STUDY CONCLUDED THAT THE EARTH IS FLAT

Affirming that the Earth is flat, assuring that vaccines cause autism or that cell phones cause cancer are some of the most stereotyped cases of false news —or fake news— on scientific topics, but the factor that unites them is not the subject but the way in which the arguments that seek to support these misleading, absurd and at times incredible claims are presented.

Precisely, discerning between rigorous information and falsehood can be more difficult when it comes to scientific issues because those who promote fake scientific news seek to give it a legitimate appearance.

The phrase "a study concluded" is perhaps the magic formula of fake news to appear serious, but it is also the one used in truthful news to guarantee that the statements were made with scientific methodology. This difficulty is what

makes fake news in science a risk to informed decision-making and even a threat to public health.

https://www.scidev.net/america-latina/news/noticias-falsas-en-ciencia-cual-es-el-riesgo-y-como-identificarlo/

W. ANDREW WAKEFIELD AND AUTISM VACCINES

Andrew Jeremy Wakefield (born 1956) is a British anti-vaccine activist, former physician, and discredited academic who was struck off the medical register for his involvement in The Lancet MMR autism fraud, a 1998 study that falsely claimed a link between the measles, mumps, and rubella (MMR) vaccine and autism. He has subsequently become known for anti-vaccination activism. Publicity around the 1998 study caused a sharp decline in vaccination uptake, leading to a number of outbreaks of measles around the world. He was a surgeon on the liver transplant programme at the Royal Free Hospital in London and became senior lecturer and honorary consultant in experimental gastroenterology at the Royal Free and University College School of Medicine. He resigned from his positions there in 2001, "by mutual agreement", then moved to the United States. In 2004, Wakefield co-founded and began working at the Thoughtful House research center (now renamed Johnson Center for Child Health and Development) in Austin, Texas, serving as Executive Director there until February 2010, when he resigned in the wake of findings against him by the British General Medical Council.

https://en.wikipedia.org/wiki/Andrew_Wakefield

X. THE DISCOVERY OF COLD FUSION BY FLEISCHMANN AND PONS

In 1989 Pons and Fleischmann (1989) announced the obtaining of significant amounts of energy through cold fusion, however the results of the experiment could not be replicated by other researchers, so it is considered that they were the result of experimental errors.

To confirm their presumed finding with new experiments, Fleischmann and Pons requested help from the US Department of Energy, which sent the request for evaluation to Steven Jones of Brigham Young University. Jones was the right expert, since he was working on another model of cold fusion catalyzed by muons, alternative particles to electrons that reduce the size of the atom, facilitating fusion. Jones's method worked, but muon production consumed more energy than fusion generated. Intrigued, Jones met with Fleischmann and Pons. Both groups agreed to send their results simultaneously to the journal Nature on March 24, 1989. But under pressure from the University of Utah,

Fleischmann and Pons advanced their submission, and the day before the agreed date they announced their discovery to the world through a statement and a press conference.

The promise of the University of Utah that the "revolutionary process" could "provide an inexhaustible source of energy" did not impress the scientific community, which reacted with enormous skepticism. Soon several institutions investigating hot fusion, including the Massachusetts Institute of Technology, reported their own results: Fleischmann and Pons's experiment did not work.

Almost immediately, cold fusion became a stigma for those who came close to it, including Fleischmann and Pons, who went into exile in the south of France to continue their privately funded experiments. Today cold fusion persists as one of the most cited examples of failed science.

https://www.bbvaopenmind.com/ciencia/fisica/fusion-fria-anatomia-de-un-fraude-cientifico/

Y. THE PILTDOWN MAN

An individual with a human appearance but with characteristics of other apes? The real missing link?

If today we read that the remains of the first Englishman in history have been unearthed along with his cricket bat, we would immediately think that they are "fake news". But a little over a century ago, there were other times, not only of more limited scientific knowledge, but also of certain vested interests that passed such news off as true for 41 years. At the turn of the 20th century, very few ancient human fossils had been discovered, and none of them in England, so this was an exciting find.

Until on November 21, 1953, the greatest scientific fraud of the 20th century, the "Piltdown man", was officially refuted.

History: On December 18, 1912, an extremely shocking news was published in the press: the missing link, the hypothetical species that related current humans to their ape ancestors, had been found. Nobody in the small town of Piltdown, in Sussex, south of London, could have suspected the fame that their place would have at the beginning of the 20th century.

https://en.wikipedia.org/wiki/Piltdown_Man

9. BIOLOGY

Z. COVID DON'T EXIST

Although it seems incredible, there are attacks on medical personnel for believing that they transmit the coronavirus. Some groups believe that it does not exist. And others attack sanitization teams for believing that they intentionally infect with their work. And nonsense is spread on the networks that we can consider "representations".

The world crisis due to the "coronavirus" shows the urgency of scientific education. This is replaced by networks and mass media, generating fear and harmful reactions. In addition to preventive measures, basic schools need to resume teaching through the Problem-Situation.

https://situationsproblemes.com/2020/07/12/la-situacion-problema-vs-las-noticias-falsas-sobre-el-coronavirus/

AA. FAKE NEWS OF CONFINEMENT

The weeks of confinement were the perfect storm for the generation of false news…Who did not receive any of the following messages?

Beards and mustaches favor the spread of COVID-19

It is convenient to leave your shoes outside the house to avoid contagion at home.

The use of ibuprofen as an anti-inflammatory is discouraged.

Drinking lemon and gargling is a good way to prevent COVID-19.

https://edem.eu/ejemplos-fake-news-y-noticias-falsas/

BB. "CANCER IS VITAMIN B17 DEFICIENCY"

First, there is no vitamin B17 (complex B includes B1, B2, B3, B5, B6, B7, B9 and B12). The B complex vitamins are found in several types of food, so only in exceptional situations should the doctor indicate their supplementation[2].

CC. "DIPYRONE IMPORTED FROM VENEZUELA WITH VIRUS"

Widely disclosed by text, image and audio in 2019, this information has already been denied by Anvisa, reinforcing the high analysis and validation criteria that all medicines go through.

DD. "VACCINES CAUSE AUTISM"

This, perhaps, is one of the oldest forms of false information and many times denied by scientific studies.

EE. "BACTERIA EXISTING IN BEANS"

The false message says that there is a superbug present in beans and that they need to be soaked for 15 minutes in vinegar.

FF. "USING GEL ALCOHOL IN THE PREVENTION OF CORONAVIRUS IS USELESS"

Other false and dangerous information, released during the Covid-19 pandemic. According to current scientific studies, just like hand hygiene with soap and water, the use of alcohol gel or liquid helps prevent coronavirus.

10. RELIGION

GG. WOMEN WHO GROW MARIJUANA IN CALIFORNIA WERE NOT CATHOLIC NUNS

In 2016, dozens of news articles and videos circulated on the Internet about women who dress as nuns and grow marijuana in California to make an ointment that is presumed to cure diseases such as cancer.

In statements to the ABC10 newspaper, the women who called themselves "Sister Kate" and "Sister Darcy" admitted that they were not religious, proclaimed themselves "spiritual nuns" and called themselves "Sisters of the Valley" (Sisters of the Valley) due to that the farm where they grew marijuana was in a town in the Central Valley region called Merced.

Kate, who declared herself a feminist and vegan, assured that the lifestyle of her "community" was inspired by ancient healers and had no link with the Catholic Church. They performed rituals before starting their work and made offerings to nature.

The woman told The Daily Beast newspaper that on one occasion she dressed as a nun for a protest and seeing the positive effect it had on people

-because they approached her, showed confidence and asked her for prayers- she decided to use it as a mark of her business.

https://www.aciprensa.com/noticias/mujeres-que-cultivan-marihuana-en-california-no-son-monjas-catolicas-29347

HH. BISHOPS OF BOLIVIA WARN THE FAITHFUL ABOUT A FALSE CHURCH THAT OFFERS SACRAMENTS

The Secretary General of the Bolivian Episcopal Conference (CEB), Msgr. Aurelio Pesoa, asked the faithful not to be deceived by the "Bolivian National Apostolic Catholic Church" since they are separated from communion with the Catholic Church.

In statements issued on August 17, 2017, Bishop Pesoa insisted to the faithful "not to be fooled by the members of this group. They hand out cards offering sacramental celebrations."

"All the members of this group, made up of priests resigned from the clerical state, suspended by their respective Bishops or ordained in invalid celebrations, are in a break with the Catholic Church, that is, they do not celebrate in communion with the Holy Father and with the Bishops, Successors of the Apostles".

"The sacraments that they supposedly celebrate and offer are schismatic acts that break the unity of the Church of Christ. Those who celebrate them, knowing that they are breaking the unity of the Church, if we call things by their name, remain in a very serious situation of rupture before the Church and before Christ".

https://www.aciprensa.com/noticias/obispos-de-bolivia-alertan-a-fieles-sobre-falsa-iglesia-que-ofrece-sacramentos-18106

II. THE WOMAN HAS NO SOUL

One of the great hoaxes that is reproduced cyclically is that the Church denied that women have a soul, as the writer and former director of the Rosa Regás National Library stated, for example, in an article of hers. And for this they refer to councils such as Nicaea or Trento, where supposedly only by one vote it was said that the woman did have a soul.

JJ. **THE CATHOLIC CHURCH, ENEMY OF SCIENCE**

This is one of the most widespread myths and has even permeated the Church. It emerged in the 19th century with the Conflict Theory, inspiring modern atheism, with the American academics Andrew Dickson White and John William Draper, both also influenced by the novelist Washington Irving, who showed his anti-Catholicism in his works and created the myth of Catholicism. flat land that Columbus faced with the Church.

First at conferences and later in widely circulated books, these scholars drew a bogus story of a long war between religion and science by speaking of a "great sacred fight for the freedom of science, a fight that has gone on for so many centuries. It's been a tough fight! A long war, with fiercer battles, with more persistent sieges, with a more vigorous strategy than any of the comparatively insignificant wars of Alexander, Caesar, or Napoleon…"

KK. **THE CATHOLIC CHURCH SUPPORTED HITLER AND REMAINED SILENT IN THE FACE OF THE HOLOCAUST**

During the 1960s, the false accusation began to circulate that Pope Pius XII had turned a blind eye to the Holocaust and therefore that the Catholic Church did not oppose Nazism, which has reached our days. But there is plenty of evidence that this Pope saved thousands of Jews from death, that he supported three attempts to overthrow Hitler and that he was one of those responsible, as Vatican Secretary of State, for the Encyclical Mit brennender Sorge of 1937 in the that the incompatibility of Nazism with Christianity was clear.

The book, "Christians against Hitler" clearly shows how the Catholic Church fought against the Nazi regime starting from the bishops, passing through thousands of priests who ended up in concentration camps where many died and ending up with simple laymen who risked their lives to save that of others.

LL. **THE POISONED CANDIES OF THE NUNS**

Fake news has always been an element of propaganda of the first order and a sign of its power in a time when there were no mobile phones or social networks is what happened in the Second Republic, although this same hoax has been used in other occasions.

The events date back to May 1936 when in Madrid, especially in the working-class and poorest neighborhoods, the news began to circulate that the nuns were giving poisoned candies to the children of these neighborhoods

in order to put an end to the Marxists. It was said that hundreds of children were dead in the schools and that the plan was to carry it out in all the working-class areas. It should be remembered that many of these children went to Catholic schools, so a mass enraged by this "fake news" burned convents, killing and beating nuns and anyone they found in their path. It didn't matter if it wasn't true. The propaganda had had an effect.

http://es.catholic.net/op/articulos/66022/cat/279/la-iglesia-una-victima-milenaria-de-las-fake-news.html#modal

11. SOCIAL VALUES OR POLITICS

MM.   THE "PRIVATIZATION" OF WATER IN MEXICO

In 2018, millions of Mexicans celebrated the victory of the Mexican National Team against the champion Germany in their debut at the World Cup in Russia, when a 'news' began to circulate: the water had been privatized.

"While we were celebrating Mexico's goal, Peña Nieto privatized the water," was the message with which a note from the newspaper La Jornada — published on Friday, June 15— began to spread on social networks, whose headline was "They will concession the water of 300 basins for up to 50 years to private companies".

And indeed, then President Enrique Peña Nieto signed 10 water reserve decrees, but it was not while the Mexican National Team was winning, but 10 days before, on June 5, and he did so in front of federal secretaries and civil society organizations in the Desert of the Lions, in Mexico City.

After the controversy that this news unleashed, Conagua and the WWF Mexico organization clarified that these decrees do not concession water to any private company, but instead establish a water reserve and an ecological flow, and that, on the contrary, they seek to prevent overexploitation of the basins.

NN. MADURO AND RUSSIA BEHIND THE CAMPAIGN OF ANDRES MANUEL LOPEZ OBRADOR

"SCANDAL! The Government of Venezuela confirms on its television channel (VENEVISION) what we all knew: Nicolás Maduro is behind the campaign of Andres Manuel López Obrador. AND NOW, CHAIROS, WHAT ARE THEY GOING TO SAY? THE GOVERNMENT OF VENEZUELA IS IT ALSO PART OF THE POWER MAFIA?"

This is how the driver Callo de Hacha broadcast a video on March 6 — supposedly made by VTV—, in which the president of Venezuela, Nicolás Maduro, is attributed a speech of support for the then presidential candidate of Morena, Andrés Manuel López Workshop.

The Verificado platform consulted Venezuelan journalists to analyze the veracity of the video and they confirmed that Maduro never made public his position towards López Obrador. In addition, they found that the recording was actually an edition that imitated the graphic style used by the state broadcaster VTV (which is not Venevisión).

OO. ALERTS FOR KIDNAPPING CAUSE FEAR AND LYNCHINGS

At the end of August 2018, in just 36 hours, four people were lynched in Puebla and Hidalgo, after false photos and notes of people accused of child theft were spread on social networks.

The messages circulated via Whatsapp and Facebook in states such as Yucatán, Tamaulipas, Jalisco, Hidalgo, Durango, Puebla and Sinaloa, and in these states parents were alerted not to leave minors alone, because "there is a plague of thugs that engaged in organ trafficking".

After the investigations carried out by the prosecutors of Hidalgo and Puebla, it was found that the four people lynched by inhabitants of those states were not related to any crime.

Given the spread of the messages, authorities issued alerts in at least 20 states so that citizens do not spread them. "There is no record so far of theft of minors (...) it is a phenomenon of disinformation at the national level," said one of those official messages.

https://politica.expansion.mx/mexico/2018/12/28/8-fake-news-que-atrajeron-nuestra-atencion-en-2018-nos-guste-o-no

PP. TRUMP AND THE STORMING OF THE CAPITOL

A great example of fake news was the supposed "robbery" of the Trump elections and the assault on the Capitol.

The tense tone, encouraged mainly by former President Trump, culminated in the unfortunate assault on the Capitol on January 6, 2021, which claimed the lives of 4 people, left 50 injured (including 14 policemen) and 52 detained.

For years, the sowing of doubt about the counting of votes has been a classic in North American elections, but in recent elections the argument has been repeated ad nauseam.

The fact that the victory of Biden and Trump was, a priori, so close in some states and the delay in processing the millions of votes by mail (due to the coronavirus) that caused the manual counting system to collapse, added to the incessant hoaxes on vote-stealing, they did the rest.

Fundamentally because President Trump did not accept defeat and dedicated himself to encouraging his followers, in massive public events and, from social networks, to "fight" to stop "electoral theft".

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GAMIFICATION AND EXERCISES FOR STUDENTS

SC PSIHOFORWORLD

CRITICAL THINKING **ABOUT FAKE NEWS**

THE HISTORY OF FAKE NEWS

Fake have been features of human communication since at least the Roman times when Antony met Cleopatra. In 44 BC Octavian waged a propaganda campaign against Antony that was designed to smear his reputation. This took the form of "short, sharp slogans written upon coins in the style of archaic Tweets." These slogans painted Antony as a womanizer and a drunk, implying he had become Cleopatra's puppet, having been corrupted by his affair with her. Octavian became Augustus, the first Roman Emperor and "fake news had allowed Octavian to hack the republican system once and for all."

Another historical fact stated that in the mid-1700s, during the height of the Jacobite rebellion in Great Britain, seditious printers printed fake news, even going so far as to report that King George II was ill, in an attempt to destabilize the establishment. Such fake news was picked up by more reputable printers and republished, making it difficult to tell fact from fiction.

In 1835, The Great Moon Hoax the New York Sun published six articles about the discovery of (non-existent) life on the moon, claiming to recount the findings of astronomer Sir John Herschel.

As we see fake news were very common in every century throughout the history. However, the first documented uses of the term occurred in the 1890s according to Merriam Webster.

Fake news has been used as a propaganda by the conflicted countries during the both world war times and it continues until today as a part of information war.

THE DEFINITIONS OF FAKE NEWS

1. Fake news (also known as junk news, pseudo-news, or hoax news) is a type of yellow journalism or propaganda that consists of deliberate disinformation or hoaxes spread via traditional news media (print and broadcast) or online social media.

2. Fake news is a neologism often used to refer to fabricated news. This type of news, found in traditional news, social media or fake news websites, has no basis in fact, but is presented as being factually accurate.

3. Fake news is made-up stuff, masterfully manipulated to look like credible journalistic reports that are easily spread online to large audiences willing to believe the fictions and spread the word.

OTHER TYPES OF FAKE NEWS

1. **Clickbait** - These are stories that are deliberately fabricated to gain more website visitors and increase advertising revenue for websites. Clickbait stories use sensationalist headlines to grab attention and drive click-throughs to the publisher website, normally at the expense of truth or accuracy.

2. **Propaganda** - Stories that are created to deliberately mislead audiences, promote a biased point of view or particular political cause or agenda.

3. **Sloppy Journalism** - Sometimes reporters or journalists may publish a story with unreliable information or without checking all of the facts which can mislead audiences.

4. **Biased/Slanted News** - Many people are drawn to news or stories that confirm their own beliefs or biases and fake news can prey on these biases. Social media news feeds tend to display news and articles that they think we will like based on our personalized searches.
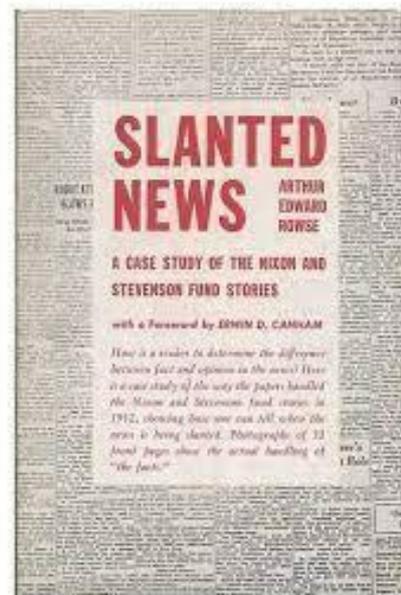
EXERCISE 1

In your opinion, what is the role of false news? Write in the box below.

....

....

....

....

....

....

....

EXERCISE 2

Mention FIVE sources of false
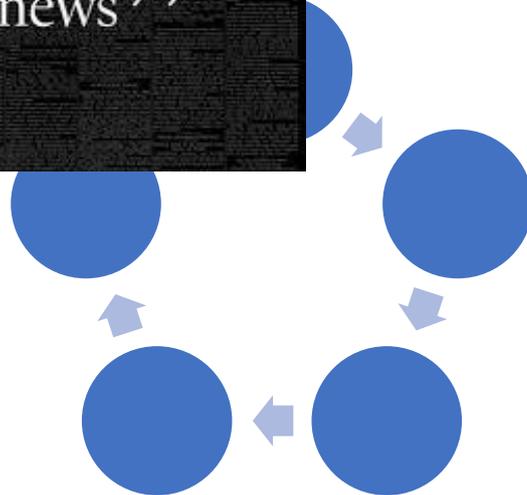
news that you know in the dots below.

EXERCISE 3

Watch the video below and choose the correct answer.

Which team wins the game for the reward?

a.   The Warriors

b.   famous

What was the score?

a.   10 to 3 for warriors

b.   10 to 7 for celebrities

c.   10 to 5 for warriors

Who is the competitor who brings the end point?

a. Emilie

b. blase

c. Andrée

Content of fake news

Title, headline - is the text indicating the nature of the article below it.

Articles - is a piece of writing that is included with others in a newspaper, magazine or other publication

Newspaper - is a periodical publication containing written information about current events and is often typed in black ink with a white or gray background.

Picture - is a design or representation made by various means (such as painting, drawing, or photography)


Voice message is a message containing audio of a person's voice.

Link (short for hyperlink) is an HTML object that allows you to jump to a new location when you click or tap it.

Text - is a book or other written or printed work, regarded in terms of its content rather than its physical form.

Bias opinion (rumor) - is a currently circulating story or report of uncertain or doubtful truth.

Social media - are interactive computer-mediated technologies that facilitate the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks

Magazine - is a periodical publication containing articles and illustrations, often on a particular subject or aimed at a particular readership (yellow media)

Movie or video – video is used from various video platforms to make fake info more realistic

Date is a date used to make a fake new looks credible

Proportion of renewables in U.S. electricity generation from 2000 to 2016
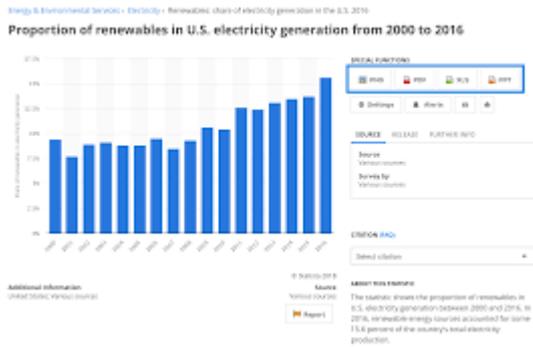
Statistic is any quantity computed from values in a sample, often the mean.

Catchy – emotions, wow news, relevant (hype) – is one of the fake news content that is used to attract audience (traffic) to a new.

Maps – it is common in nowadays online media to fake topography, geolocation or google maps, buildings or any other objects that are reflected on the google or other maps

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EXERCISE 4

Imagine that you are a primary school teacher. Try to teach a lesson to the students using the words: <u>clouds, water, precipitation, steam.</u>

It is necessary to know all the terms in order not to give erroneous information.

EXERCISE 5

generally valid opinions or truths:

1. Boiling water at 100 degrees Celsius

   opinion / truth

2. Kindergarten is beneficial for the child

   opinion / truth

3. Thin cylinder-shaped object made of wax or other solidified fat, having in the middle a textile wick, which, when lit, burns with flame, producing light.

   opinion / truth

4. Stray dogs cannot be trained

opinion / truth

5. Psychology is the science that deals with the study of the psyche

opinion / truth

EXERCISE 6

Mention whether the news below are true or false.

1. Numerous videos and news reports have suggested that antibodies after vaccination can bind not only to the spike protein of the coronavirus, but also to a similar protein called syncytin-1, which plays a role in building the placenta in the uterus. If this protein is inhibited by the immune response after vaccination, this leads to infertility.

T / F

2. 600 bodies of babies and children were allegedly taken by the waters in the flooded area. A video clip from a television report by the German channel N-tv is used as evidence. In the filming, the reporter mentions in one sentence the traumatic experiences of the inhabitants of the disaster area who allegedly found the bodies of children in their homes.

T / F

[https://www.google.com/imgres?imgurl=https%3A%2F%2Fwww.science.org%2F
do%2F10.1126%2Fscience.abl5271%2Fabs%2Fgermanyfloods_1280x720.jpg&imgr
efurl=https%3A%2F. science.org% 2Fcontent% 2Farticle% 2Feurope-s-deadly-
floods-leave-scientists-stunned & tbnid = tab Kb2GWxCsGM & vet =
12ahUKEwix3tPA18_1AhVlwgIHHWxHDhAQMygcegUIARDmAQ..i & docId =
8IwfetnflWMUmM & w = 1280 & h = 720 & ITG = 1 & q = flood & ved =
2ahUKEwix3tPA18_1AhVlwgIHHWxHDhAQMygcegUIARDmAQ]

3. The girl in the picture was allegedly killed by an Israeli air strike in the Gaza Strip, according to social media posts.

T/ F

https://amp.dw.com/ro/fake-news-2021/a-60237538
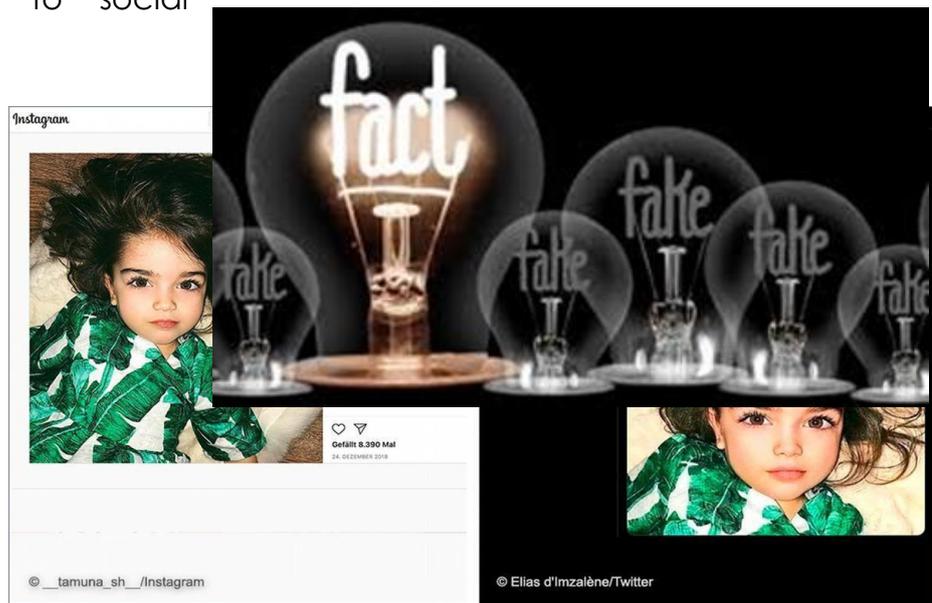
EXERCISE 7

Choose the correct option.

1. One of .... does not admit the fake news, but thinks it is real information. This is the result of an online survey conducted by the think tank "Stiftung Neue Verantwortung" among 4,000 participants over the age of 18.

a. 10 French

b. 3 Germans

c. 5 Russians

2. The sudden and sharp rise in temperature of the planet in the twentieth century is caused by ....

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a. It's human greenhouse gas missions

b. Normal temperature changes

3. Viruses undergo constant mutations, and usually the more powerful variant, which is more contagious, prevails. According to leading virologists, the causes of these are:

a. vaccinated people who incubate or give birth to new variants of the virus

b. unvaccinated, infected, with weakened immune systems in countries with low vaccination rates.

EXERCISE 8

Writing fake news.

In order for the news to be covered, the topic must be interesting, the headline must be attractive and shocking, and the news must be argumentative and seem to be supported by specialists.

Write your own fake news based on the tips above.

How to identify FAKE NEWS

HEADLINES
Check if the headline is too flashy and conveys an unthinkable message

WWW
Check if URL name looks bogus OR has similar name of true site but slight spelling change

SCRUTINIZE
Check if the author of the article is the one you know OR trust. Check author's profile or site's 'About' page

CONTENT
**Check if the page layout/formatting looks normal to you. Are there any spelling mistakes?**

IMAGES
Check if the image in the article looks morphed. Try to verify the image on the internet by searching it

DATE
Check if the article's date is relevant to the content. The occurrence's date within the content may be false
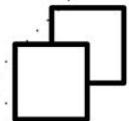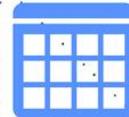
ALTERNATIVE
Check if the article is also published on other sites you trust. If it is not present then the article may not be true

HUMOUR
Check if the article's intention is to create humour. Such articles do not convey true facts instead they are funny
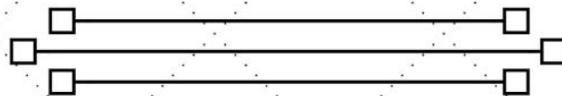
SHARING
Be a responsible reader & share only those news which you've analyzed are true

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