gamefy

Find fake news and avoid them!

INTRODUCTION TO DIGITAL MEDIA LITERACY

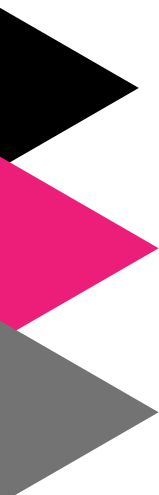# CURRICULUM

Content

Introduction

The Index of European Policies Initiative of the Open Society Institute assessed the resilience potential of fake news in 35 European countries. It is clear from the map that Southeastern Europe is the least resilient region in Europe.

The 2020 EU Kids Online Survey found out that European children's and adolescents' information navigation skills are low compared to their operational, social, and mobile skills. On average, only 59% said they find it easy to check if the information they find online is true. This study has shown that the current situation should be of great concern to European countries. False beliefs based on fake news have an extremely negative impact on the public agenda concerning a wide range of topics, ranging from political attitudes to reactions to the pandemic. Once again, the study confirmed the wide discrepancies among EU countries with Southeastern Europe again scoring much lower than other regions.

Gamification of media and digital literacy for youth (GaMEfy) is an Erasmus+ funded project aimed at creating an accessible and reliable AI-equipped educational tool for young people, which will enhance their truth-seeking skills as well their media and digital literacy. The project will also cite scientifically proven methods to that goal, addressed to youth workers and educators in a concise and comprehensive manner. GaMEfy project will also create Guidelines based on the piloting of the educational game, both of which will serve to improve the overall educational approach towards digital and media literacy.

The Curriculum is designed as the basis of the simulation game to be developed under the project but is also an educational tool on its own. It focuses on digital literacy and ways of identifying fake news for the youth. The Curriculum will be available in 6 languages with the opportunity for expansion and is designed as educational material and tool useful for improving digital and media literacy.

Each chapter of the Gamefy Curriculum is designed to be addressed to young people aged between 13 and 30. Though the main knowledge inputs are the same across different age groups within the-13-to-30-year-old focus group, the practical exercises and examples following differ among the following sub-target groups: 13-18 (color coding: blue), 19-25 (color coding: green), 26-30 (color coding: purple). This special feature was developed in order for educators and youth workers to be able to create more engagement of their respective audiences. Hence, it is highly advisable that you maintain the color-coded exercises according to your target group.

Furthermore, each chapter includes a PowerPoint presentation as well as a document stating the core issues raised. The language used in the document was selected to be basic so that it addresses all prospective audiences. The PowerPoint presentation contains numerous visual aids in order to stimulate the trainees and accomplish high engagement levels.

Introduction to Digital Media Literacy

The purpose of this chapter is to define the terms essential to clarify the meaning of literacy, i.e. the ability to read and write. Also fundamental in literacy is the ability to listen and speak. Literacy is not considered a static situation, but it is constantly changing and evolving. New types of literacies have emerged over the past 50 years. These include such terms as information literacy, media literacy, media education, visual literacy, news literacy, health media literacy, or digital literacy. Those terms are linked to the changes occurring and the new competencies required by the labour market and society in general.

Media literacy is described as a set of skills that promotes critical engagement with messages produced by the media. Those messages are delivered to the public through different platforms such as newspapers, magazines, radio stations, television channels, the internet or devices like laptops, tablets or smartphones. The majority of media organizations are delivering their messages via a multitude of platforms. Hobbs & Jensen (2009) describe media literacy as the "active inquiry and critical thinking about the messages we receive and create".

Such competencies are currently more essential than ever. Our everyday life is overwhelmed by various online platforms which bombard us with masses of information, making it more challenging to filter and cross-check. Dramatic changes were recorded after the entry of the World Wide Web into the daily lives of millions of people around the world, with many to follow after the advent of Web 3.0. Hence, it is that the youth or older adults should be educated on media literacy issues, so that they optimally adapt to the changes ahead.

The video titled "What is media literacy?" (https://www.youtube.com/watch?v=GIaRw5R6Da4) is traced to the ninth slide of pptx attempts to present the most important elements of media literacy. It was created by Media Literacy Now and according to the short description that accompanies: "Intended as a tool for advocates, the video introduces the concept of media literacy as a key that unlocks meaning behind the messages that we see and allows us to be more thoughtful and deliberate as we create our own messages – such as those we create and share on social media."

Digital Media Literacy is "a set of life skills which are necessary for full participation in the modern media-dominated society". Digital literacy helps to enhance a plethora of cognitive, emotional, and social competencies. Among them is the ability to use different tools and technological achievements, to enhance critical thinking skills, to create diverse messages considering the social media platform you use and your target audience, to engage in ethical thinking, and to become active citizens.

Media and digital media literacy are based on the principles of traditional literacy by enriching it with new skills. Those skills are driven by the changes taking place in the technological field. . Thus, the competencies of digital media literacy are the following: access, analyze and evaluate, create, reflect and act. As it is defined by Renee Hobbs in the book Digital and Media Literacy: A Plan of Action (2010), digital and media literacy is "A constellation of life skills that are necessary for full participation in our media-saturated, information-rich society. They include the ability to do the following:

▶ Make responsible choices and access information by locating and sharing materials and comprehending information and ideas.

▶ Analyze messages in a variety of forms by identifying the author, purpose, and point of view, and evaluating the quality and credibility of the content.

▶ Create content in a variety of forms, making use of language, images, sound, and new digital tools and technologies.

▶ Reflect on one's own conduct and communication behavior by applying social responsibility and ethical principles.

▶ Take social action by working individually and collaboratively to share knowledge and solve problems in the family, workplace, and community, and by participating as a member of a community."

Therefore, the purpose of digital literacy is to encourage the active participation of the citizens and to provide them with the necessary tools in order to meet the challenges society is facing today.

Democracy is seen as an asset for the Western world. However, for its maintenance and continuation it is vital for the citizens to develop competencies such as a) reading or watching the news, b) talking with family, co-workers, and friends about current events, c) commenting on online news stories, d) contributing to online community networks, e) participating in opinion polls and g) searching for information on issues of special interest.

The skills to be acquired in order to be regarded as a digital media literate are the following:

- ◾ Find and consume digital content
- ◾ Create digital content
- ◾ Share digital content

Commonly, we learn those skills in an amateur way, lacking the necessary theoretical background. But is this safe? Who will guarantee that we use the internet in a beneficial way both for us and society?

By acquiring the necessary knowledge, we can find and use media and technology tools skillfully. Correspondingly, we can make responsible choices and access information by locating and sharing materials and comprehending information and ideas. This contributes to sharing appropriate and relevant information with others and to analyzing messages in various forms by identifying the author, purpose, and point of view, and evaluating the quality and credibility of the content. Also, to comprehend the messages and use critical thinking to analyze the message quality, integrity, credibility, and point of view, while considering potential effects or consequences.

Digital media literacy is focused on the education of individuals concerning the content created and communicated. Online platforms give the ability to choose if someone wants to disseminate a message by using written language, images, sound, or all the above-mentioned and provide a plethora of new digital tools and technologies. As regards the quality of the message, a media literate person can compose content using creativity and confidence in self-expression, with an awareness of purpose, audience, and composition techniques. Social responsibility and ethical principles are the core values driven by the messages shared which reflect on personal conduct and communication behavior. Digital media focus on individual or collaborative actions with the aim to share the knowledge acquired and stresses the need for problem-solving actions in various aspects of everyday life such as the family, the workplace, or the community.

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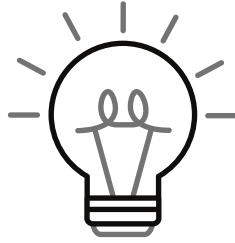
The information seeking on the web is related to literacy. In detail, among the skills acquired is the proper use of search engines, reading search results, and skimming web pages to access the information. Although the above-mentioned practices are used on a daily basis, few users are experts. Search engines, such as Google, have a series of tips and tricks that could help you find easily the information you seek.

How can someone develop digital and media literacy competencies? Internet users should use a variety of texts, ranging from mass media content to popular culture and digital media.

Books, movies, websites, newspapers, blogs, wikis, and games could boost digital media literacy skills. It is essential to use information search and evaluation strategies on online platforms. You should read, view, listen, and discuss the accuracy of digital media content. Gaming, simulation, and role-playing approaches could be used. It is essential to conduct a cross-media comparison.

You should always keep in mind that you are not only a consumer but also a content creator. In order to create multimedia content, you have to acquire more skills and be more creative compared to those needed to write a text message. Initially, a good practice is to keep a "media diary", meaning a list of the content you consume and create on a daily basis. You will be amazed when you realize the power you have, and the influence exerted on you by others. In this way, you can track down if there are similarities or differences among the online products/messages you choose to consume or create.

The credibility of information is essential in literacy in general. The channels and the messages shared on the internet are infinite. For example, you could be informed of the latest updates via news websites, social media platforms, newsletters, instant messages. This means that we can receive the same information through multiple channels, from different people, in different forms such as video, image, or text. And therein lies the need to cross-check the information.

Firstly, in order to verify if a news story is reliable, we need to check the name of the author. Is the article signed? Do we know the author's name? Have we read other articles of his/hers? If so, were they reliable? We should be able to know what the purpose of the message is. Is it informative? Is it an opinion article or reportage? Also, how the message was created. This refers to the creative process. Which words are used? Are they emotionally charged? Which pictures or videos are chosen? It is essential to cross-check the news story and the information given. Go to a search engine and check the news websites that shared the story. Are they reliable? As regards the provided information, can you tell if the sources used are biased or unbiased? Are the sources used reliably or not?

To summarize, the significance of digital media literacy is essential for social and human development. It contributes to improving our understanding and proper use of digital technologies, communication tools, and the Internet. It helps us to comprehend the advantages and disadvantages of using digital technologies, communication tools, and the Internet. It brings to the spotlight malicious digital behavior (e.g., illegal downloading, dissemination of fake news) and discusses its consequences and the ethical issues that arise. It gives us the necessary theoretical background in order to understand digital media concepts such as copyright, fair use, plagiarism, and intellectual property.

In addition, it re-educates us and provides us with tips and tricks on how to retrieve specific information on various topics, to compare information from multiple sources in order to evaluate reliability, validity, accuracy, and authority. It enhances critical thinking and gives the necessary tools in order to research the ownership of major websites and their impact on people's perception by framing the news or the messages shared. Furthermore, it describes the risks faced while using social networks and how we can protect ourselves, our family, and our community.

Among the unseen issues of the internet are the filter bubble and the echo chamber effect, both of which can distort reality. A filter bubble is a term coined by Internet activist Eli Pariser and it refers to a state of intellectual isolation as a result of the individual searches and the algorithms that keep tracking of what you like to click on and give you content you'll likely consume. As Pariser stated it is "a unique universe of information for each of us … which fundamentally alters the way we encounter ideas and information". The echo chamber is "an environment where a person only encounters information or opinions that reflect and reinforce their own". This can create misinformation and distort a persons' ability to see the important facts and opposing viewpoints. The echo chamber is correlated with confirmation bias, which is the tendency to favor information confirming their existing beliefs.

The risks identified on the Internet are divided into three categories: content, contact and conduct risks. In particular, content risks include exposure to potentially offensive or harmful content, such as violent, sexual, sexist, racist, or hate material. Contact risks are referring to practices where people engage in harassment, cyberbullying - cyberstalking, talking with strangers, violating privacy. As regards conduct risks, they encapsulate practices such as lying or intentionally misinforming people, giving out personal information, illegal downloading, gambling, or hacking.

Issues related to the online world that have an impact on the real world. Evidence is mounting that there is a link between social media and symptoms of depression. Social media depression refers to the impact of the use of social media on emotional wellness, physical, and mental health. "A Social Life" is an award-winning short film written and directed by Kerith Lemon. The film is "about a career driven woman named Meredith who's living the life she's always dreamed of… online. Meredith strives to live a balanced life: staying fit, working hard and connecting with her friends; she is creating her "image" within her broader social media friend base. But she awakes one day and realizes that her reflection is merely the collection of photos that she has shared with others. Is this her life? Or just a carefully curated brand?"

As the world becomes increasingly digital, literacy ought to cope with the current and upcoming challenges. Technology evolves and so are the types of digital media and online platforms. Thus, this makes digital media literacy for people of all ages more essential than ever.

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Different forms of Digital Media

The 2nd chapter seeks to introduce you to the different forms of digital media. So, what is digital media? Digital media are any media that are encoded in a machine-readable format. Digital media can be created, viewed, distributed, modified, and preserved on digital electronics devices. As we move into the future, the daily use of digital media will increase, especially as holography and artificial intelligence technologies evolve and integrate into our daily lives.

Anytime you use your computer, tablet, or cell phone, opening web-based systems and apps, you are consuming digital media. Digital media might come in various forms such as videos, audio, podcasts, music, audiobooks, video games, blogs, articles, advertisements, virtual reality platforms, or digital art.

Social media is one of the most popular forms of digital media. They provide access to unlimited multimedia and virtual reality content. Social media platforms such as Instagram, Facebook, Twitter, Snapchat, Pinterest, or TikTok give billions of users the ability to be informed and get the latest news updates, to share ideas and content.

Audio is a type of digital media content. It is a part of a transmitted signal that can be recorded and reproduced. Audio signals can be transmitted through solid, liquid or gas. As regards audio content, it includes digital radio stations, podcasts, and audiobooks.

Digital radio is the transmission and reception of sound processed into patterns of numbers, or "digits". In contrast, traditional analog radios process sounds into patterns of electrical signals that resemble sound waves.Podcast is a digital audio file made available on the internet for downloading to a computer or mobile device, typically available as a series, new instalments of which can be received by subscribers automatically. As regards the audiobook, it is a recording of a book or other work being read out loud.

If you love hearing podcasts, podcastinsights.com has a step-by step tutorial on how to create a podcast and what you need to pay attention to. From choosing a topic to promotion tips it provides you with all the necessary information needed in order to become an expert on the field.

Digital image and video are regarded as types of digital media content. Digital image is the representation of the visual characteristics of an object composed of picture elements (pixels). Common image file formats are the TIFF (.tif, .tiff), GIF (.gif), and PNG (.png). Digital video is an electronic representation of moving visual images. Common video file formats are the MP4 (.mp4), MOV (.mov), WMV (.wmv), FLV (.flv) and AVI (.avi).

Images and videos are widely used on social media platforms. They have become one of the most popular forms of media over the last decades due to their ability to be concise, attention grabbing and entertaining. For the same reasons, they are included in the reports published on news websites.

Streaming services such as Netflix offer a plethora of video content (films and television series) to millions of users around the world.YouTube is one of the most known platforms hosting billions of videos. Launched in 2005, the website is one of the most popular destinations on the web.

Videos are used as educational tools in order to amplify learning. They enhance students' engagement and motivation, facilitate thinking and problem solving, increase knowledge retention and help them develop digital literacy and communication skills. Hence, video content is used at all levels of education.

Video editing is the manipulation and arrangement of video shots. Video makers are the tools that help you edit videos. Online platforms such as Animoto, Clideo, or Biteable provide you the opportunity to create your own video for free. You can create it by simply using your smartphone and you can afterwards send it to your computer or directly upload it on a social media platform.

A free online tool that can be used in order to create multimedia content is Canva. Canva is a graphic design platform, used to create social media graphics, presentations, posters, documents, and other visual content. The app already includes templates for users to use. The platform is free to use but offers paid subscriptions like Canva Pro and Canva for Enterprise for additional functionality.
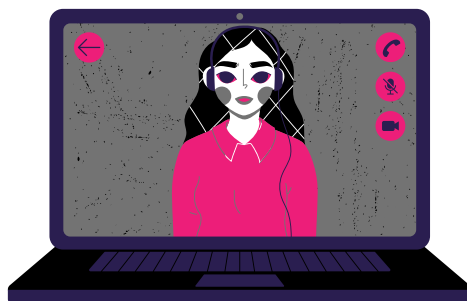
In order to make a video using Canva you should follow the steps below:

1. Start a new project: Sign up for Canva using Facebook or Google. Log into your account and search for the Video design type, or Facebook Video, Video Slideshow, Video Collage, YouTube Video, Instagram Stories, and YouTube Intros. From there, you can start from scratch or browse templates for inspiration.

2. Explore templates: In Canva's library, you'll find templates for educational videos, review videos, explainer videos, marketing, and sales videos, travel videos, beauty, and fashion videos, and more. Click on your favorite to make it yours.

3. Discover features: Explore millions of designer-made photos, images, icons, illustrations, and other graphics. Add notes or duplicate pages. Work on your design with others using the collaborative tool.

4. Customize your video: Upload your videos and images into the editor. Choose your own color scheme and background. Trim, edit and add filters to your clips. Add music from Canva's free music library. Apply animations and stickers for motion.

5. Save and share: Happy with your design? Download your video as an MP4 or GIF. Share directly on Facebook, Twitter, or Instagram with a few easy clicks. Return to the editor to make changes at any time.

Another cloud-based video creation service is Animoto. It produces video from photos, video clips, and music into video slideshows, and customized web-based presentations. Clideo is an all-in-one video marketing platform that includes tools to create, edit, compress, and package video for delivery to just about any audience on the web. Biteable is a web-based tool that allows you to create beautiful explainer videos that you can easily add to your classroom to share with your students and make your lessons more interesting and engaging.

Pixabay is a vibrant community of creatives, sharing copyright free images, videos and music. All contents are released under the Pixabay License, which makes them safe to use without asking for permission or giving credit to the artist - even for commercial purposes. Just enter a keyword in the search section and you will see images below. When you choose the picture you want, you can simply download it

A webpage is a specific collection of information provided by a website and display to a user in a web browser. A website typically consists of many web pages linked together in a coherent fashion. The name webpage is a metaphor of paper pages bound together into a book. There are different types of websites such as magazine websites, e-commerce websites, blogs, portfolio websites, or social media websites.

According to Merrriam_Webster dictionary, social media are "*forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content.*"

Among the most well-known social media platforms are Twitter, Facebook, Instagram, LinkedIn, and Snapchat. Those platforms enable their users to interact with one another through text posts, photographs, and videos, leaving "likes" and comments to create conversations around pop culture, sports, news, politics, and the daily events of users' lives.

Social media is regarded as a mediator for communication. They give their users the opportunity to exchange information and ideas, to develop their interests, to be informed regarding the latest news, to self-educate and to share their expertise.

Additionally, social media can be used to improve opportunities for employment. Online recruitment, also called e- recruitment or internet recruiting is a way to identify, attract and recruit potential employees by using various electronic means and technologies. Organizations can now attract job applicants from around the world with just one click. LinkedIn is among the most popular business-related social networks.

As detailed below, differentiations can be found on social media platforms:

➡ **Tumblr** is an American microblogging and social networking website founded in 2007 and currently owned by Automattic. The service allows users to post multimedia and other content to a short-form blog. Users can follow other users' blogs. Bloggers can also make their blogs private.

➡ **Facebook** builds technologies that give people the power to connect with friends and family, find communities, and grow businesses.

➡ **Instagram** allows you to create and share your photos and videos with the friends and followers you care about.

➡️ **LinkedIn** is an American business and employment-oriented online service that operates via websites and mobile apps. Launched in 2003, the platform is mainly used for professional networking and allows job seekers to post their CVs and employers to post jobs.

➡️ **TikTok** is used to make a variety of short-form videos, from genres like dance, comedy, and education, that have a duration from fifteen seconds to one minute.

➡️ **Youtube** is also one of the social media platforms in a way - on which you can enjoy the videos and music you love, upload original content, and share it all with friends, family, and the world.

➡️ **Twitter** is an American microblogging and social networking service on which users post and interact with messages known as "tweets". Registered users can post, like, and retweet tweets, but unregistered users can only read them.

Advertising -another type of digital media- is the activity or profession of producing advertisements for commercial products or services. Advertisers take advantage of social media and other online platforms in order to promote their products or services. "*Social media advertising, or social media targeting, are advertisements served to users on social media platforms. Social networks utilize user information to serve highly relevant advertisements based on interactions within a specific platform*".

According to IGI global "An electronic book, also known as an e-book or eBook, is a book publication made available in digital form, consisting of text, images, or both, readable on the flat panel display of computers or other electronic devices". Although sometimes defined as an electronic version of a printed book, some e-books exist without a printed equivalent. "E-books can be read on dedicated e-reader devices, but also on any computer device that features a controllable viewing screen, including desktop computers, laptops, tablets and smartphones".
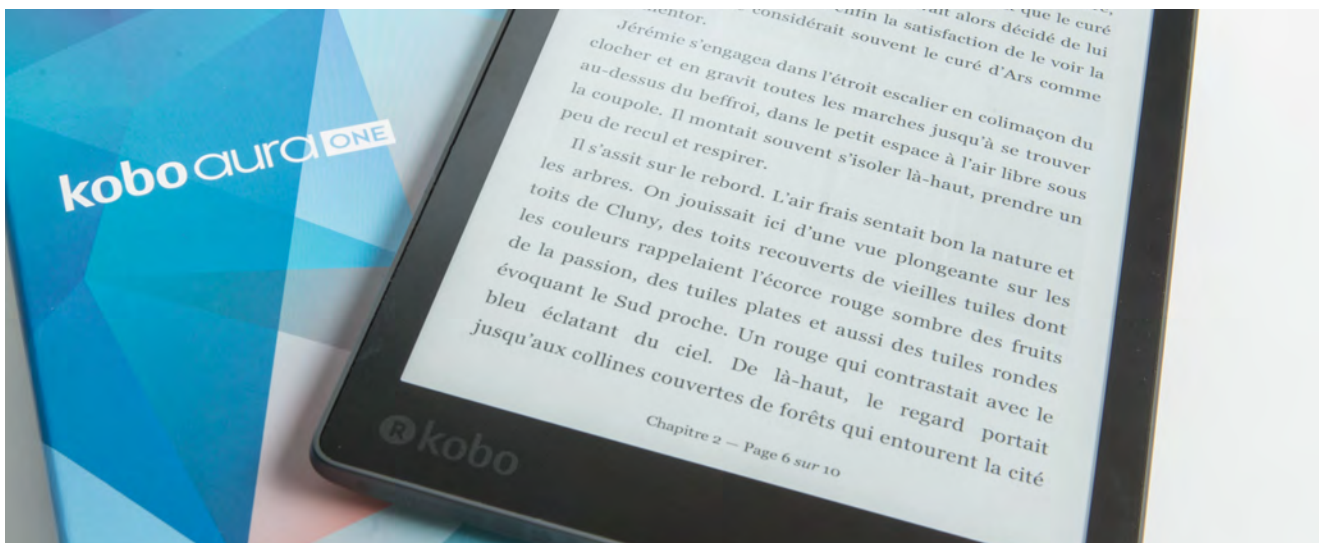

"Video game is a game played by electronically manipulating images produced by a computer program on a monitor or other display. It involves interaction with a user interface or input devices – such as a joystick, controller, keyboard, or motion-sensing devices, to generate visual feedback for a player."

Recent research has found that video games could support young people's literacy, creativity, and empathy and improve mental wellbeing during the lockdown. In detail, video games can give young people a route into reading and writing, improve confidence in young people's reading skills and immerse young people in stories. Additionally, they can support positive communication with family and friends, increase empathy and support wellbeing and engage reluctant readers with literacy.

Video game addiction is considered to be one of the negative effects of video games. It is generally defined as the problematic, compulsive use of video games that results in significant impairment to an individual's ability to function in various life domains over a prolonged period. Some of the warning signs of video game addiction are:

• Poor performance at school, work, or household responsibilities as a result of a preoccupation with gaming.
• Neglect of other hobbies or friendships.
• A decline in personal hygiene or grooming.
• Inability to set limits on how much time is spent gaming.
• Signs of irritability, anxiety, or anger when forced to stop gaming, even for brief periods of time.
• The need to spend more time playing games or to play more intensely in order to get the same level of enjoyment.
• Symptoms of physical or psychological withdrawal, such as loss of appetite, sleeplessness, agitation, or emotional outbursts if the game is taken away.
• Using video games as a way to escape stressful situations at work or school, or conflicts at home.

Video games can be used as educational tool. Get bad news and Cyber Chronix are two games that can enhance your knowledge and your skills.
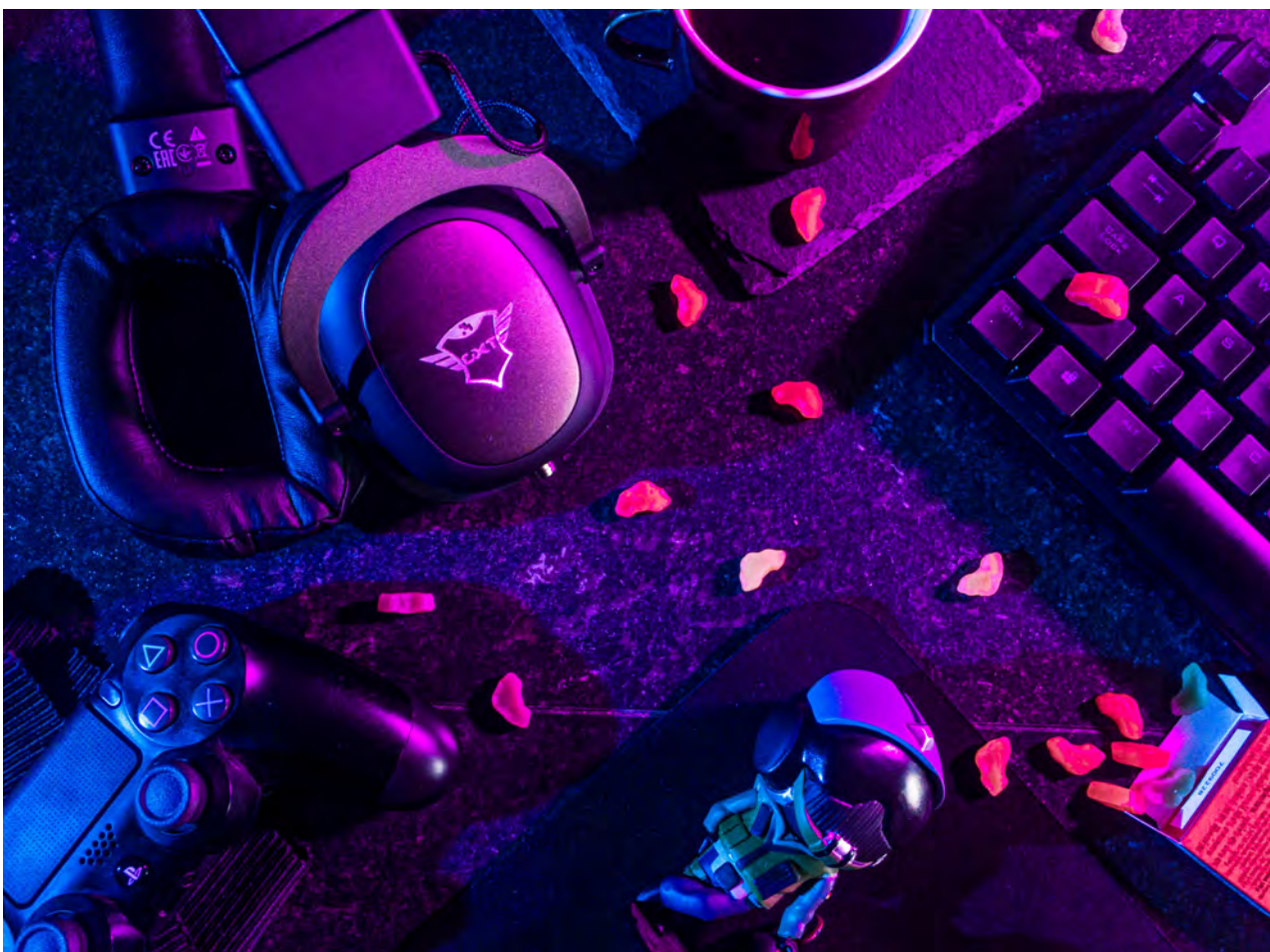
Furthermore, "**Get bad news**" is an online game that puts players in the shoes of ambitious propagandists and masters of spreading misinformation. Players gain an audience on their fake online media by posting lies that divide society, using purchased bots, falsifying photos, and spreading conspiracy theories after a tragedy. At the same time, they must constantly take care of their credibility, as they must remain seemingly as credible as possible so as not to lose followers.

"**Cyber Chronix**" is a game in the format of branching story-telling comics. It has been thought starting from the assumption that reading and understanding a regulation is not an easy task and (young) citizens must be aware of their data protection rights and understand how to exercise them to control their data and mitigate privacy risks. Concepts introduced in the GDPR such as "the right to be forgotten", the "data breach", "the data portability", etc. can be unusual terms for those new to this language. In Cyber Chronix, some of these terms are firstly introduced in an informal way during the dialogues and interactions among characters. In addition, quiz questions called XRay to appear and challenge the player during the game session. A dedicated educational part called XRay+ is always available for the player-reader, who wishes to know more.

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Digital Media Literacy - How is it different?

The 3rd chapter of the Curriculum will provide theories of the field of communication.

As we have mentioned in Chapter 1, media literacy is the ability to identify, produce, critically think about, and analyze information or media content. It addresses both content consumers and creators. As regards the consumers, the aim is to develop critical thinking. As for creators, it promotes social responsibility, critical and reflective thinking concerning the content disseminated and possible effects arising.

Digital media literacy is the ability to responsibly, cautiously, and securely use digital technologies to communicate, connect with others, and create or share various content. Another relevant term is digital data literacy, meaning the ability to process (collect, transform, analyze) and communicate the data. Digital media literacy encompasses all media literacy forms, while giving emphasis on technical skills such as algorithms, use of computers, or coding.

Furthermore, it enables people to be prepared to use opportunities and respond to challenges related to use and production of information and media content in the digital era. Hence it puts emphasis on:

- creation and use of digital and social media, but also games.
- use of digital tools for fact-checking and identifying distorted media content and information.
- development of new methods and tools, e.g. in the field of engaged (media and audience interact, co-create content) or citizen journalism/media (audience creates content which is published and distributed by the media).

  In general, new methods and tools are being developed to enable producers to create high-quality and engaging content (e.g. interactive videos) and audience to see between and behind the lines. Compared to traditional media literacy, the digital one is focusing on games and the gamification approach.
In the digital era, media and journalists are becoming more open and are looking for effective ways of engaging and interacting with an audience. Engaged journalism/media is an approach that strengthens their relationship and increases trust in media. Audiences have more opportunities to express their opinion or share information and are able to define the importance of topics and be involved in agenda or decision making (similar to e-participation in the field of active citizenship). More people can also contribute to the production of media content.

The line between producers and consumers is more blurred. Concepts of **prosumption** or **produsage** emerged thanks to the digitalization of media. A prosumer is a person both consuming and producing information or media content. There are six basic types of prosumers: **a)** DIY prosumers, **b)** self-service prosumers, **c)** customizing prosumers, **d)** collaborative prosumers, **e**) monetized prosumers, and **f)** economic prosumers. The terms prosumer and prosumption were coined in 1980 by Alvin Toffler Produsage is user-led content creation. This term was coined by Australian media scholar Axel Bruns. Examples are citizen journalism or social media. It's similar to commons-based peer production, where large numbers of people cooperate on the creation of the content.

In order to better understand the field of literacy, reference should be made to relevant communication theories/models. Initially, we should clarify the meaning of some terms to better comprehend the following theories. An *original source* is a person or an organization making the information known first such as an author, a witness, a conversation partner, or the media. A *recipient* is regarded as a person or organization receiving the information, i.e., the audience, or a listener.

In this handbook, we will cite several communication theories. The concept of the **One-step flow theory of communication** supports that information from the original source reaches the recipient directly. It is supported by the diversification of media and the customization of content. Sources of information are transmitting them directly to the audience without interference. The gate-keeping effect of big media is decreasing. Content, especially advertisement, is reaching the audience on the basis of a person's preferences or behavior in the online space. On the other hand, people are influenced by previously gained knowledge and experiences, which serve as a filter of information. Misinformation and disinformation creators are counting on this model.

The **Two-step flow theory of communication** is a communication process in which the media communicates the message to the audience indirectly by using another medium, i.e. opinion leaders. It has been a subject of criticism which made it unpopular.

Additionally, the **Multi-step flow theory of communication** was first introduced by sociologist Paul Lazarsfeld et al and focuses on the nature of sharing information. The message is delivered indirectly. The original message is processed and presented by one or several intermediaries such as influencers, media, friends, or colleagues before it reaches the final recipient. This gives opportunities for an audience to be active (become an intermediary) or even co-create the content.
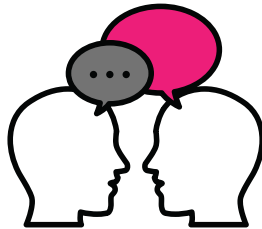
Another relevant theory is the **Hypodermic needle model (magic bullet theory)**, which it's not always related to the one-step flow of communication. Information provided by the media reaches its recipient directly and has an immediate effect. This model may work today in the case of powerful messages, when someone strongly believes the media/source of information, or when a person doesn't think about presented information and accepts it as a fact. The audience is passive.

Several theories in the field of behavioral psychology, are composing the ones of communication. Among them are the theories related to opinion and symbolic leaders, the cognitive dissonance theory, and the spiral of silence. As regards opinion leaders, we are referring to individuals or organizations who are regarded as experts or can exert a significant amount of influence in their network and they can influence others' opinions. Symbolic leaders are people, organizations, or institutions having an indirect influence by using symbols to unite and inspire followers. Politicians and religious leaders are among them.

According to the **Cognitive dissonance theory**, people should experience dissonance in order to change their minds. To persuade them is essential to offer a proposal to resolve the feeling of discomfort in order to reduce it and achieve emotional equilibrium. This tactic can lead to a change of mindset but can also enhance selective exposure, i.e. people follow only media that confirm their opinions.

The Spiral of silence was proposed by Elisabeth Noelle-Neumann, and it states that people tend to stay silent when they believe that their opinion is in opposition to the majority view. They believe that if they express their views they might be excluded or isolated, so they stay rather silent.

Aristotle is credited as the first person to write about the "**Wisdom of the Crowd**" in his work titled Politics. It refers to the collective opinion of a group of individuals. Wisdom of the Crowd theory has gained importance in the digital era and is explaining assumptions on which platforms such as Quora, Stack Exchange, or Wikipedia are based.

On one hand, people are less dependent on opinion or symbolic leaders, on the other hand, they can be influenced by the group (crowd or social bubble). On the basis of criteria separating wise crowds from irrational ones formulated by James Surowiecki, wise crowds are characterised by the diversity of opinions, independence of their members, decentralization -people can specialize and be focused on a local level), aggregation of information or opinions that can support decisions of the whole group, and trust of members towards the group. The opposite is irrational crowds.

In relation to engaged media/journalism it's important to mention three main types of disorganized decisions described by James Surowiecki that can support this approach:
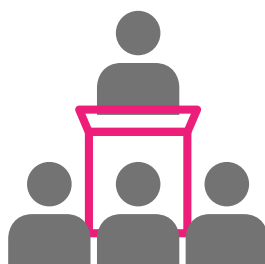
→ Cognition: mutual cognition of needs, the audience can recognise important local topics better and faster than media leaders.

→ Coordination (of actions): allowing the audience to enter a discussion about topics/agenda can ensure the media will address local needs.

→ Cooperation: people can form networks with media producing content at a local level without interference from headquarters.

The Risk of automatic evaluation is an issue lying on the Web. Some online tools may wrongly evaluate a person's preferences, because they don't consider individual needs (e.g. questionnaires before elections) or use the internet browser history (e.g. advertisement customised on the basis of previously visited websites).

There are four types of communication: verbal, non-verbal, visual, and written. The information-sharing models examine the origins of a message, who receives it, and how many people are involved on each end. The "*One-to-one*" model refers to a conversation between two people, personal interaction between medium and audience members. The most common is the "*One-to-many*" model and can be found in traditional media, and digital media. Additionally, it applies to individuals disseminating their content on social media platforms, such as influencers, politicians, or content creators. The "*Many-to-one*" model is when a single person receives messages from more than one source of information. Typical examples of this are newspaper articles, news broadcasts, or commercials. As regards, "Many-to-many" model, information is created from multiple sources and received by multiple sources. This model of sharing information can be found on internet-based networks such as social media, discussion groups, live chats, or various online communication platforms.

The model of one-way communication occurs when the information is sent from one person to another, and the receiver does not give feedback of any kind. In two-way communication both sender and receiver interact and exchange messages and listen to each other.

What digital media literacy offers to the public and the media?

1.Digital media literacy for recipients (audience)

- People are acting as more active media users in the digital age.

- Importance of critical thinking about information before sharing it.

- Ability to react to misinformation (report, respond to it – e.g. comment).

- Ability to become producers as well – produsage or prosuming of information and media content: influencers, YouTubers, bloggers, citizen journalists.

- More opportunities to engage with media/journalists.

- Responsible use and contribution – do not forget that law applies on the internet as well, pay attention to the safe use of digital and social media.
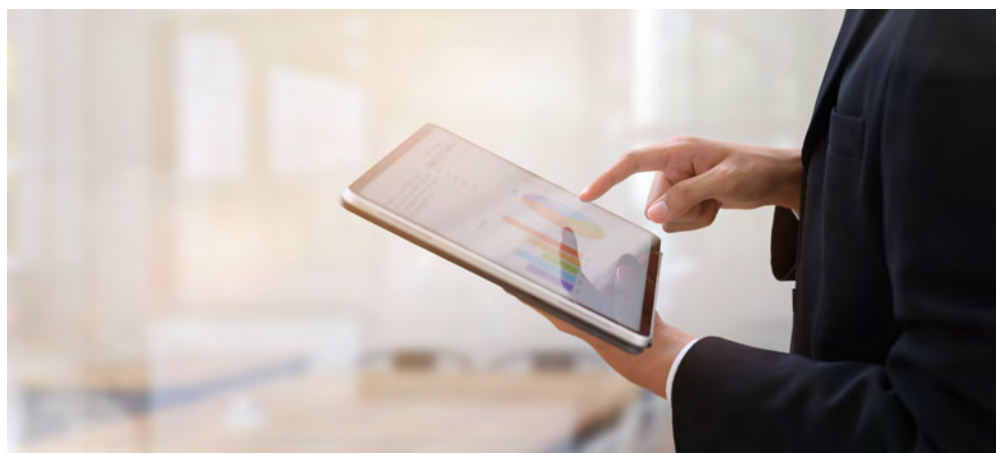
2. Digital media literacy for producers (content creators, media, journalists)

- Opportunities for improvement of the quality of content and mass media as a whole.

- Growing need to have competences to respond to misinformation, increase the trust of citizens, and tackle media vulnerabilities (such as cybersecurity).

- Use of tools for fact-checking and revelation of distorted information and media content, including deep fake.

- Use of new tools for interactivity and creation of multimedia – e.g. StoryMaps.

- More opportunities for connections with an audience: e-participation tools, discussion forums. However, already before the digital era, there were practices of audience engagement, e.g. interactive shows, during which people were able to influence the direction of the story.

- Pay attention to copyright; there are also more opportunities to protect intellectual property, for example through tools on YouTube.

Digital media literacy could also be a tool for entrepreneurs and influencers. The digital environment brings not only opportunities, but also to face challenges that are related to misinformation, negative marketing or communication, and unethical or even unlawful behaviour. The skills and tools to be acquired can help to better manage potential crises that may arise.

Language of media

There are four relevant fields of study that help us understand and analyze the language of media and reveal potential hidden meanings, distortion, or manipulation, semiotics, semantics, pragmatics, and syntactic.

Semiotics is "*the study of signs and sign-using behavior. It was defined by one of its founders, the Swiss linguist Ferdinand de Saussure, as the study of "the life of signs within society*". It is worth mentioning "*Peirce's seminal work in the field was anchored in pragmatism and logic. He defined a sign as "something which stands to somebody for something," and one of his major contributions to semiotics was the categorization of signs into three main types: (1) an icon, which resembles its referent (such as a road sign for falling rocks); (2) an index, which is associated with its referent (as smoke is a sign of fire); and (3) a symbol, which is related to its referent only by convention (as with words or traffic signals). Peirce also demonstrated that a sign can never have a definite meaning, for the meaning must be continuously qualified*". Important terms related to semiotics are signifier (physical representation of concept or meaning, it can be icon, index, or symbol) and signified ("*a concept or meaning as distinguished from the sign through which it is communicated*").

As regards **semantics**, is part of semiotics, which deals with questions of how the meaning in signs is created, communicated, and decoded. Additionally, pragmatics refers to the study of how context (social, economic, historical, environmental, cultural, etc.) contributes to meaning. "It is a subfield of linguistics and semiotics that studies how context contributes to meaning".

Syntactics *is "the arrangement of words in sentences, clauses, and phrases, and the study of the formation of sentences and the relationship of their component parts". "Syntactics is a branch of semiotic that deals with the formal relations between signs or expressions in abstraction from their signification and their interpreters"*. In audiovisual media, syntax is the arrangement of various components of the picture (title, graphics) or motion picture (order of pictures or scenes).

⚠️

In the glossary section you will find the meaning of main terms and concepts such as text, context, authorial intent, sign, denotation, connotation, symbol, trope, simile, metaphor, metonymy, and synecdoche. Also, the definition of tools and methods used to encode meanings in the audio-visual media, such as Scene setting – mise-en-scène, editing, length of a shot, angle of a shot, colour, lighting, combination of sound and picture, music and special effects.

Social responsibility and regulation of digital media

The role of the media is to inform, criticize and arouse debate. Furthermore, to consider various effects that the published media content might have on the public and the responsibility that arises from their role towards the audience and the society. Media should ensure a digital safety environment for their audience (secure websites and tools) and empower individuals to be resistant to disinformation and harmful content (through media products and learning opportunities).

The social responsibility of the media does not only apply to the public service media. It supports the independence of media and broad public discussion about their role and content. It should not be confused with corporate social responsibility (CSR).

It is related to the relations between the media with their audience including sources of information and people affected by media coverage in the final outcome or production process and mass media regulations. It helps to avoid commercialization, meaning the excessive use of advertisement in public service media, or dependency on the corporate sector. As well as intentional manipulation or unintentional distortion of media content including unprofessionalism and spread of harmful content, i.e. hate and divisive speech, and defamation.

Media ought not to publish content that supports disinformation, harmful content, or illegal behaviour. Concerning defamation, they have to prove that it was needed to publish certain information through defences of honest opinion, of truth, and of public interest. Serious harm and defences mentioned above are defined in the Defamation Act 2013 of the Parliament of the United Kingdom. In this context, the media should do a serious harm test – ask questions to check whether the work can cause a serious harm to someone's reputation (defamation, libel, etc.). Likewise, they should think about possible negative effects on the audience, even if there is no legal regulation (potential harm test). In justified cases the defences mentioned above may apply as well during legal proceedings.

Media analyses – traditional and digital

Below are cited the main points to analyze the media content.

Methods:

→ Analyzing whole media content (e.g. newspaper, TV program) or one-piece (e.g. an article):

- Quantitative (how often is a certain topic presented, what is the frequency).
- Qualitative (where is the topic presented, when, how long, in which format, etc.).

→ Analyzing one media piece:

- Semantic – what is obvious or hidden in the text. What meanings are encoded?
- Syntactic (parsing) – the structure of the media piece: analyzing sentences, paragraphs, and whole text. Are some words or sentences present very often? Is the media piece consistent? Are quotations used?
- Contextual – what is the socio-political, historical, and cultural context of the media piece. Is the information presented in the right context? Who is interviewed? It can be also used for the analysis of whole media content.

Process of the analysis:

- Hypothesis or aim of the analysis.
- Questions.
- Finding the answer: verification (aim to approve the hypothesis) and falsification (aim to disprove the hypothesis).

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Public Service and Commercial Media in the Digital Era

The media landscape has undergone significant changes and has evolved over the years. Technological and socio-economic developments have contributed to its progress, transformation, and expansion. Among the features that have remained stable are the provision of information services, wide acceptance, and growing influence around the world.

The media has been regarded as the fourth estate of guarding the public interest. Numerous people are stating that the media commodify news and regard people as consumers rather than citizens. In this chapter, we will try to clarify the role of public and commercial media.

Public Service Broadcasting (PBS) consists of radio, television, and other electronic media to inform the public without making any profit. In many countries, it is founded on fees collected by the government from citizens. They can operate at regional or national level. The World Radio and Television Council define Public Service Broadcasting as "neither commercial nor State-controlled, public broadcasting's only raison d'etre is public service. It is the public's broadcasting organization; it speaks to everyone as a citizen. Public broadcasters encourage access to and participation in public life. They develop knowledge, broaden horizons and enable people to better understand themselves by better understanding the world and others."

British Broadcasting Corporation (BBC) was the first public broadcasting established in 1922. The first Director-General of the BBC, John Reith, stated that its mission is to "inform, educate and entertain". Additionally, "to carry into the greatest possible number of homes everything that is best in every department of human knowledge, endeavor and achievement." BBC was addressed to "every order of social class, every grade of educational and intellectual entertainment, every variety of like and dislike, taste and distaste, on every conceivable subject."

The principles of public broadcasting are:

- *Universality*: accessible to every citizen; democratic; not catering only to one group of consumers.
- *Diversity*: in terms of genres of programs offered; audiences targeted, and subjects discussed.
- *Independence*: free of commercial pressures or political influence.
- *Distinctiveness*: from other broadcasting.

Commercial broadcasting consists of television, radio, and other electronic media owned by private companies or corporations. As their name indicates, their purpose is to make a profit from their programs and commercials (advertising).

One critical role of the media is the so-called agenda setting. Agenda-setting refers to the media's ability to influence the importance placed on the topics of the public agenda. More specifically, agenda setting refers to the idea that there is a strong correlation between the emphasis that mass media place on certain issues (e.g., based on the relative placement or amount of coverage) and the importance attributed to these issues by mass audiences (McCombs & Shaw, 1972).

Media bias relates to the unjustified favoritism media exhibits when they cover the news. This means that a news item may be presented in a specific way or intentional information may be hidden. Hence people have a distorted image concerning issues that directly or indirectly affects them. Media bias can also be found in PSB, especially in authoritarian regimes.

Following we will list forms of media bias:

- *Bias by omission*: portraying only the on a news article or a series of articles. It can also occur when a news outlet presents constantly one side of the story. It can be found only on a set of events, but not another.

- *Bias by emphasis*: it refers to the stories prioritized and highlighted by the media and regarded as more significant compared to others. For example, the articles listed firstly on a website, the stories broadcasted first on television or radio.

- *Bias by use of language:* when a reporter or a media labels a person or a group using positive or negative words ("expert", "terrorist," "revolutionary"). The selection of those words usually is not related to identity.

- *Bias in photos*: the images selected can misinform or distort the public's opinion regarding the issues reported.

- *Bias in the source:* when the sources selected promote and support only one side of an issue, ignoring or concealing other sides. Journalists or news outlets search for quotes that are best for their argument in a news story.

- *Bias by headlines:* Studies have shown that most people read only the headline. Thus, many media outlets choose titles with the sole purpose of grabbing attention. The selected words are emotionally charged. Many times, they are not related to the main text of the article, misinforming the public.

- *Bias by repetition:* A willingness to believe information that has been told to us numerous times by different sources.

- *Bias in numbers and statistics:* When a statistic or a model does not represent the population. It refers to the overestimation or underestimation of parameters used.

Media has long been influenced by politicians and for political purposes – and now that has transferred to the digital sphere as well. From using their own channels in social media, through strong politically leaning media companies' websites, social media, content, all the way to using bots, fake profiles, and other manipulative techniques, political figures aim to influence people in different ways online.

During a crisis or before elections polarization is intensifying and social media is playing a key role in this. For example, during the lead-up to the referendum in the UK, which led to Brexit, the media, especially online, was very heavily politically charged. A typical example is Brexit and the period that preceded it. The two campaigns ("leave" and "stay") utilized several strategies -the majority of whom were emotionally charged- in order to deliver their messages and attract as many voters as they can.

As commercial media base their funding on advertisements, advertisers influence media accuracy. Influence can occur in two ways: directly and indirectly. The commercial media structure their program to attract the audience addressed by the advertisers. Studies have shown that especially in times of financial crisis when the media is dependent on advertisers' money the presentation of news includes biased information.

Technological developments and the widespread use of social media by consumers have turned them into marketing tools. Social media are used by businesses for their marketing strategies. Digital marketing "*Online marketing is the practice of leveraging web-based channels to spread a message about a company's brand, products, or services to its potential customers. The methods and techniques used for online marketing include email, social media, display advertising, search engine optimization, Google AdWords, and more. The objective of marketing is to reach potential customers through the channels where they spend their time reading, searching, shopping, and socializing online.*" The four main pillars in marketing overall are called the marketing mix, or the 4 P of marketing: Place, Product, Promotion, and Price.

Advertising in digital media has changed significantly, especially in the way ads are presented to and accepted by consumers. Advertising now leans more on user-generated content, collected personal data for personalization & targeting, social media, and more direct contact.

Influencers have reshaped digital marketing. Several times, influencers promote products and services via their accounts. This development has led many social media to create tags to inform the public when a product or service is advertised. Instagram is one of the first social media networks which adopted this tactic.

The shift of consumers to online shopping has made it imperative to inform them of the risks they may face. Being digital media literate also means being a conscious consumer when shopping online. Before purchasing a product or service consider the following questions:

- Where is it sold?
- Is it freely available?
- Does it include a warranty?
- How was it advertised?
- Are there any additional services?
- Was this product/service really on sale?

When ordering online, pay attention to the a) authenticity of the online store, b) safety of payment method, c) shipping, return & refund policies and d) customer reviews.

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Information verification and critical thinking

 Chapter 5 of Gamefy's project curriculum will focus on fake news and critical thinking. The aim is to learn how to verify a news item and to identify if the provided information can misinform or disinform. Also, an important goal is to improve critical thinking skills to recognize framing in the news, which may depend on the medium or the author.

 But what is fake news and why was it chosen by Collins' dictionary as word of the year in 2017? Fake news is "f*alse, often sensational, disseminated information under the guide of news reporting*". Fake news is mostly disseminated by people who believe in its truthfulness. These are purposeful lies, the author of which wants to deceive the public in each matter, or he / she is only interested in higher website traffic to gain a profit.

 False information is disseminated through several various dubious websites with the intention to deceive and manipulate public opinion in favor of a certain person, group, political party, or country. Sometimes fake news might spread unintentionally. An example would be if someone shares without knowing false information, which is then included in articles. The original author might delete that information after a while, but it will remain part of the content of other websites for a long time, continuing to affect hundreds and possibly thousands of people.
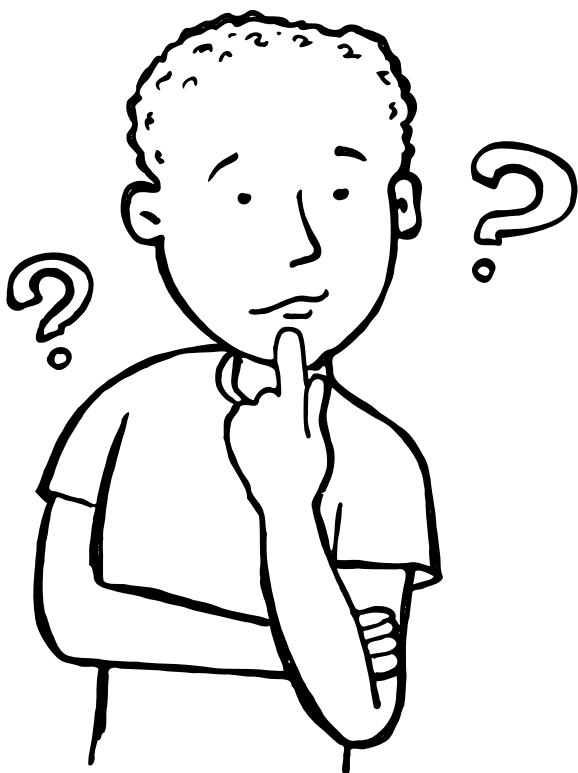
Mal information is the reality-based information used to cause harm to individuals, social groups, organizations or countries. An example of mal information could be the release of a politician's private communication during a culminating election campaign, which portrays him in a very negative light and could cause him/her a loss in the upcoming elections.

The website Dictionaire.com named misinformation as the word of the year in 2018. Misinformation is the dissemination of false information which is not intentionally created. Those sharing this type of misleading or false content are not doing it deliberately. Sometimes they are unable to properly check or verify it. An example could be the information provided concerning the casualties shortly after a terrorist attack occurs.

On the contrary, disinformation is the false information that is intentionally created and disseminated to harm other people, groups, organizations or countries. Typical examples of disinformation content could be detected during the pre-election period, when various hoaxes are intentionally published to harm opponent political candidates.

The main purpose of those creating disinformation content is to influence the way thoughts and actions of receivers. Those narratives might be created by foreign governments, domestic organizations and individuals or groups of individuals. In the digital age the fibers possess the so-called troll factories, which is an organization set up in order to publish a large number of messages or posts on the internet, that often appear to be from people who do not really exist, and that are intended to cause trouble or to influence political views.

Propaganda is not a new issue and can be characterized as a systematic and historically very successful method of manipulation. Since the 19th century, it has been used mainly in the political sphere as part of various agendas of politicians and interest groups to emphasize and adopt their ideas or laws. The main goal is to influence the public and to favor one or more opinions. Propaganda cannot be understood as synonymous with disinformation, although on the other hand disinformation can serve the interests of propaganda. It is often much more manipulative than disinformation, as it works very much with the emotions of the recipients.

In past years the term "post-truth" dominated public discourse and causes debate. The term was Oxford Dictionaries word of the year in 2016. It refers to "*relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief*". It is connected to the framing of the news and the influence of public opinion by hiding or degrading some aspects of a news item.

As we have already mentioned critical thinking is among the main goals of media literacy. According to Scriven and Paul (1987) "*Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action*."

Critical thinking is a kind of method or process of cognition, which contains several abilities and skills. Although experts do not agree on the exact definition, it can be said that it is the ability not to succumb to the first impression, but to form our own opinion based on the information and knowledge gained. The process begins with the problem raised respectively with asking questions. It is an independent thinking, which inevitably leads to interaction with other people, as it is necessary to meet with different arguments and attitudes of others to the matter. In the context of uncritical thinking, a person does not evaluate, reveal, assume, and his/her judgment represents only an irrational and passive assumption.

With regards to articles, the public should read carefully all of its parts. Misinformation elements may be found in the headline, main text, sub-headlines, pictures, graphics, multimedia components. Conflicting information should not be provided. Otherwise, it should be clearly stated why the information provided is contradictory.

It is important to cross check the provided information and think critically. By asking additional questions, it is easier to verify the information. A critical person is able to form not only his own opinion, but to understand the historical context, to have an overall social outlook and thus to understand and connect various political or economic contexts. Also, to have the ability to use various communication and information technologies.

According to brittanica.com, confirmation bias is "the tendency to process information by looking for, or interpreting, information that is consistent with one's existing beliefs. This biased approach to decision-making is largely unintentional and often results in ignoring inconsistent information. Existing beliefs can include one's expectations in a given situation and predictions about a particular outcome. People are especially likely to process information to support their own beliefs when the issue is highly important or self-relevant".

How to verify information

Nowadays the average user has to deal with a plethora of information, without having the proper skills to recognize misleading content. On the internet, information can be published by unreliable people who intentionally or unintentionally disseminate fake news misinforming the public. It is up to each of us to get familiar with the simple procedures of verifying information and to learn to question ourselves properly - to start thinking critically! We must realize that we simply can't escape today's world of media culture, it is all around us.

It is crucial to know the origin of the information, the source that is provided to you, the date the article was published and the location where the described incident took place. The following questions will help you do some basic checks:

·**Origin**: Is this the original account, article or piece of content?
·**Source**: Who created the original content or account? Are there any supporting sources?
·**Date**: When was the content created? When was the account established?
·**Location**: Where was the content captured?

An informative article is structured based on the "Inverted pyramid structure", meaning that the most important information is at the beginning (first paragraph), the least important information is at the end. You should always note if different parts of the text correspond with each other. A critical attitude towards the text should be observed during and after the end of the reading. Let's take as an example the headline of an article you read. Ask yourself, does it correspond with the provided information? Is it deliberately selected in order to draw attention?

There are three types of headlines:

- Neutral headlines provide an overview (summary) of the main story structured in an inverted pyramid scheme. They are required to be short and clear. "In the process, the news writing evinces a relatively certain tone".
- Forward-reference headlines create more uncertainty about the information or a whole story. They are clickbait-type headlines aimed at drawing large attention to the media piece by emphasizing interesting or unknown information, which is then elaborated by the media piece (not in the case when the headline contradicts the rest of the text).
- Question-based headlines are another representative of clickbait-type headlines aimed at creating uncertainty, in this case by posing a question about the information contained in a media piece. The question is then answered by the rest of the media piece (but not always).
- Shocking/emotional headlines seek to grab the audience's attention by scandal, attempt to scare or provoke emotions.

Misleading headlines can manipulate the public's perception. A large number of internet users only read the titles of the articles appearing on their social media news feed. Many media outlets choose titles that present the information in a way that fits their agenda. This is the reason why while reading an article we discover that the title presents only a part of the truth. Misleading headlines are associated with the struggle of several media (mainly tabloids) to gain more visitors and to improve their website readability.

Another type of misleading title is the so-called clickbait, which motivates you by invoking emotion -mainly curiosity- to pique your interest in clicking on a link that leads you to a specific web page. Such headlines usually contain expressions like "it is shocking", "you won't believe!" or "It is totally true! No one will tell you this! It is 100% true!". It is considered an unethical practice but is not prosecuted by law.

Moving on to the main text of the articles, users should cross-check the information provided by the author. Fake news can be detected in various types of articles such as those that focus on social matters or domestic and international politics (especially in the pre-election period). From 2020 onwards COVID-19 and vaccines dominate the interest of the media and consequently, the number of related fake news has increased. New data combined with conspiracy theories are flooding the internet and social media platforms.

In recent years, the refugee crisis triggered the spread of misinformation concerning the refugees and migrants arriving in Europe and increased xenophobia. Articles spreading false information regarding minorities are indirectly incite hatred, discrimination and reinforce human rights violations. This proves that the spread of false news can lead to the disruption of the status quo and the overthrow of the social acquis.

Initially, you should identify the medium that first reported the news. If the information is not found in major and reputable media outlets or official organizations, you should take a cautious approach to its validity. One of the most used forms of manipulation is the combination of real events with inaccurate or completely fabricated facts. Because the report is based on a real event or situation, it is often difficult for the average reader to recognize the false information. Hence, it is crucial to verify the provided information through multiple sources.

Social media users sometimes share information regarding incidents that occurred a long time ago. This happens because users do not pay attention to the date the information first published. It is worth mentioning that sometimes websites deliberately hide the dates in a number of articles, especially when they know that the issue will attract users and increase their readability.

The newly established deepfakes are considered to be one of the most difficult forms to detect and debunk. Its use is not yet very widespread, but it is expected to cause considerable problems in the future. It is mainly about creating a video using a form of artificial intelligence called deep learning. Fake videos can only be created from a few photos, and the technology is expected to advance in a few years. Most of them present mainly important politicians such as Donald Trump or Barack Obama or other famous people such as Mark Zuckerberg. The vast majority of them have so far been pornographic in nature.

Disinformation can also be spread through images or videos that are part of the article. Photos can be edited in order to depict events or people in a perspective that differs from reality by using Photoshop or cropping the picture. Is regarded as an effective method of manipulation, as the human brain tends to easier believe and absorb visualized data and information.

The Internet provides you with the necessary free tools in order to verify an image. In order to cross-check an image used in an article or disseminated via social media accounts, you can use online platforms such as Google reverse image search, Bing, Yandex, or TinEye. Geolocation helps figure out where a specific incident took place. Recommended free online tools are Google Maps, Google Earth, and Yandex.

InVID is a useful tool for detecting fake news on the internet. The platform offers a range of tools to help identify misinformation in images and videos. At the same time, it enables you to quickly get contextual information from social media and cross-check the information in search engines.

Satirical articles aimed to entertain the audience can become the source of a wave of disinformation online. Users who may not understand them as a parody and can share them with the belief that they describe real events and. It is therefore essential to ask yourself: "Could it really happen?". Find the original source (according to our fact-checking tips) and you might find out that it was first published on a website that presents itself as satirical.

So, why are disinformation and misinformation so popular? Fake news can spread incredibly fast in a short period of time. Their content is almost always sensational which contributes to their uncritical acceptance. They are financially profitable, which means that many people make money from them. It is widely used by political, non-political entities or individuals in order to easily gain power and influence.

Fighting all the above-mentioned information disorders requires fact-checking. Fact-checking is the process that seeks to verify sometimes factual information. Today, there are several fact-checking news organizations around the globe, such as Politifact (USA), Snopes (USA), Full Fact (USA), AFP Factuel (France), Mimikama (Austria), Ellinika Hoaxes (Greece), Maldita (Spain) or Teyit (Turkey If you have any doubts concerning an issue, visit the site of a fact-checking organization. For more easy-to-use solutions, you can use Google's "Fact Check Explorer" to get the most recent fact check results for a topic or a person.

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E-safety

The last chapter of the Curriculum aims to educate internet users in issues related to their safe online navigation, personal data protection and cyberbullying.

E-safety, also known as 'internet safety', 'online safety', or 'web safety', is often defined as the safe and responsible use of technology, such as the use of the internet or communicating using electronic media. In practice, it includes online behaviour and electronic security. The aim is to protect and educate users on how to technology and develop the appropriate mechanisms to intervene and support any incidents where appropriate.

Its purpose is to provide the necessary theoretical background in order to develop the necessary skills to cope with risks related to content, contact and conduct. Content risks include exposure to illegal, inappropriate or harmful material, contact risks are when someone is being subjected to harmful online interaction with other users and conduct risks referring to personal online behaviour that increases the likelihood of, or causes, harm.

In recent decades the internet has been an integral part of our daily lives. People of all ages use it to communicate, to shop, to pay their bills. Following we will list the main risks young users face while using different kinds of technology online.

▪ **Viruses and pop-ups** – By using catching messages cleverly try to fool unsuspecting users. When you click on a pop-up message like that, a site opens on your browser, from which a virus can be downloaded to your computer. Pop-up messages are not always harmful. It is a practice used by advertisers to captivate the audience and sell products or services.

▪ **Digital Footprint** – your digital footprint includes the data stored online as a result of your internet activity. Our digital footprint contains information such as comments on social media, online video calls, applications used, or email records. Those are regarded as part of online history and can potentially be seen by other people or tracked in a database. On the basis of your digital footprint, companies can send inappropriate messages advertising products or services. Use the Facebook profile ID and Graph Search tool www.graph.tips to find out how much information can be found about yourself.

▪ **Cyberbullying** causes significant emotional and psychological distress. Just like any other victim of bullying, cyberbullied young people experience anxiety, fear, depression, and low self-esteem.

▪ **Seeing inappropriate images and material** – includes information or images that can upset youth, material that is directed at adults, inaccurate information or information that might lead or tempt a young person into unlawful or dangerous behaviour.

▪ **Sexting** includes online practices such as sending, receiving, or forwarding sexually explicit messages, photographs, or videos, primarily between mobile phones, of oneself to others. Sexting is illegal when it involves anyone under 18 or to harass people of any age. Young people can be charged and potentially registered as sex offenders if they create, receive or transmit a sexualised image or video of a person under 18. Victims of sexting may experience serious psychological harm and ongoing damage to their reputation.

▪ **People use the Internet to meet young people** – pedophiles are using online platforms to communicate with minors. Young people should not talk to strangers online. Additionally, they should pay attention to their privacy settings and information shared publicly with other users.

Here are 11 tips to follow to feel safe online:

1) Keep your personal information professional and limited

2) Keep your privacy settings on

3) Practice safe browsing

4) Make sure your internet connection is secure

5) When needed use a secure VPN connection

6) Be careful what you download

7) Make your online shopping from secure sites

8) Choose strong passwords

9) Be careful what information you post

10) Be careful who you meet online

11) Keep your antivirus program up to date.
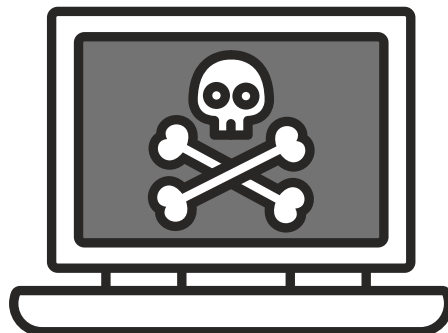
The rules mentioned above should also apply to social networking platforms. We have to share our personal information, photos and thoughts with a small number of people, as we do on a daily basis in the physical world. Platforms like Facebook, Instagram give their users the opportunity to adjust their privacy settings accordingly.

The applications we use on the internet require us to create an account by entering a username and password. The goal is to protect us from hackers who want to use information or services to their advantage. But are the passwords we choose strong enough to protect against such attacks?

Here are some tips in order to create strong passwords:

- Do not use personal information (name, birthday, username, or email address).

- Your password should be at least six characters long, containing uppercase and lowercase letters, numbers, and symbols.

- Do not use the same password for all your accounts.

- Avoid using words that can be found in the dictionary. For example, home3 would be a weak password.

- Use a password generator to create a random password, if you are having trouble to create one.

According to stopbullying.gov (https://www.stopbullying.gov/cyberbullying/what-is-it), an official website of the United States government "*Cyberbullying is bullying that takes place over digital devices like cell phones, computers, and tablets. Cyberbullying can occur through SMS, Text, and apps, or online in social media, forums, or gaming where people can view, participate in, or share content. Cyberbullying includes sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can include sharing personal or private information about someone else causing embarrassment or humiliation. Some cyberbullying crosses the line into unlawful or criminal behavior*". Cyberbullying can occur on social media, online forums, chat rooms, and gaming communities. It can be delivered via instant messaging, email, or comments on posts uploaded on social media platforms.

Cyberbullying concerns us all. We have to draw the attention of young people and train them so that they can recognize and deal with such harmful tactics.

Following we will recite tips on how to prevent it online:

- Refuse to pass along cyberbullying messages.

- Tell your friends to stop cyberbullying.

- Block communication with cyberbullies; delete messages without reading them.

- Never post or share your personal information - or your friends' personal information - online.

- Never share your Internet passwords with anyone.

- Do not share information online regarding your life.

- Avoid sending messages when you're angry or upset.

- Always be as polite online as you are in person.

Helplines have been set up in all countries. are confidential, which means that they will not tell anyone what you tell them, unless they are very worried about your, or someone else's safety. They can also help you get in contact with other services, if you need them. If you have witnessed such practices do not hesitate to contact the competent authorities and report the incident.

Glossary

Affiliate marketing is a model used to advertise products or services. In this type of model, the company pays others such as bloggers, influencers to advertise their products.

Angle of a shot: lower or higher angle suggests how the audience should perceive the person in front of the camera.

Audio is a type of digital media content. It is a part of a transmitted signal that can be recorded and reproduced.

Authorial intent is a position that argues that the creator of a text possesses a privileged understanding of its meaning and that consequently, any interpretation that contradicts this understanding must defer to the author's intentions.

Citizen journalism, journalism that is conducted by people who are not professional journalists but who disseminate information using Web sites, blogs, and social media.

Clickbait is messages aiming to draw attention and click on a website's link.

Clubhouse is an audio-based social media app. Users share information and stories via voice messages.

Colour: use of special filters to represent the situation and mood.

Combination of sound and picture whether the person speaks loudly or quietly and the presence of background noises can influence the perception of the person or story.

Connotation is a term referring to additional meanings, e.g. personal, emotional, cultural, etc.

Content risks include exposure to illegal, inappropriate or harmful material

Context is the background, environment, setting, framework, or surroundings of events or occurrences. Simply, context means circumstances forming a background of an event, idea or statement, in such a way as to enable readers to understand the narrative or a literary piece". Each author creates a text with an intention to inform, entertain, provide aesthetic or emotional experience, promote a viewpoint, etc. (internal influences).

Defamation: false statement that is published or communicated to damage a person's reputation.

Denotation is the literal or dictionary meaning of the word.

Digital image is the representation of the visual characteristics of an object composed of picture elements (pixels).

Digital marketing "Online marketing is the practice of leveraging web-based channels to spread a message about a company's brand, products, or services to its potential customers.

Digital radio is the transmission and reception of sound processed into patterns of numbers, or "digits"

Divisive speech: statements written or said to cause disagreement between people and their separation into different groups. It can even divide (polarise) the entire society. It's mostly intentional and supports latent hostilities and dissatisfaction.

eBook is a book publication made available in digital form, consisting of text, images, or both, readable on the flat panel display of computers or other electronic devices.

Editing – cuts and transitions: order of scenes can change the perception of the whole story. Editing is a powerful tool for manipulation and deception. Information can be easily taken out of context. Transitions are used to achieve artistic impressions or convey jumps in time or space.

Extreme opinions can be also harmful and considered as hate speech, depending on where and when they are expressed. Generally, they are opinions, beliefs, or statements which are disapproved by most of the people, because they are different from what is considered as reasonable, common, or ethical.

Fake news is "false, often sensational, disseminated information under the guide of news reporting".

Falsification – proving that something is wrong. Falsifiability means that a statement, theory or hypothesis can be contradicted by evidence. For example, the statement "All swans are white" is falsifiable because one can observe that black swans exist. "Falsifiability was introduced by the philosopher of science Karl Popper in his book Logik der Forschung.

Hate speech: words, phrases, or sentences that can harm someone or encourage hatred towards someone. It's intentional, but sometimes people spread hate speech without knowing about the consequences it may have.

Honest opinion (statement of opinion and not a statement of fact), of truth (the statement is true), and of public interest (defendant reasonably believes that publishing the statement was in the public interest)

HTTP (Hypertext Transfer Protocol) is an application protocol for distributed, collaborative, hypermedia information systems that allows users to communicate data on the World Wide Web.

HTTPS (Hypertext Transfer Protocol Secure) is a combination of the (HTTP) with the Secure Socket Layer (SSL)/Transport Layer Security (TLS) protocol. TLS is an authentication and security protocol widely implemented in browsers and Web servers.

Inverted pyramid structure - the most important information of an article is sited at the beginning (first paragraph), the least important information is at the end

Length of a shot - how much time is dedicated to a certain topic or person.

Libel - written defamation (today mostly in letters, blog posts, comments, chats).

Lighting - the intensity and quality of lighting influences perception of the situation.

Literacy is the ability to read and write. Among the foundational elements of literacy are also the ability to listen and speak.

Mal information is the reality-based information used to cause harm to individuals, social groups, organizations or countries.

Media literacy is described as a set of skills that promotes critical engagement with messages produced by the media

Metaphor - dissimilar objects are compared without use of words such as like object is referred to by mentioning another one (e.g. you are an angel; the Big Bang).

Metonymy - object represents another one that is closely associated (e.g. White House – U.S. President or administration).

Misinformation is the dissemination of false information which is not intentionally created.

Music is usually used to provoke emotions.

Original source is a person or an organisation making the information known first such as an author, a witness, a conversation partner, or a media.

Post-truth is relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.

Scene setting – mise-en-scène arrangement of everything that appears in front of the camera. It can convey additional, even hidden, meanings. Key aspects are: set design, lighting, representation of space, composition, costumes, makeup and hairstyles, acting, film-stock, and even the aspect ratio.

Semiotics is "the study of signs and sign-using behaviour. It was defined by one of its founders, the Swiss linguist Ferdinand de Saussure, as the study of "the life of signs within society.

A sign is anything that is communicating a meaning, e.g. letter, word, shape, or sound.

Simile - dissimilar objects are compared through the use of words such as „like" or „as" (e.g. innocent as an angel).

Slander - spoken defamation.

Social media - are forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content.

Special effects are used to make the media piece more attractive but can be counterproductive if they have a bad quality or are inappropriate.

Symbol is a sign that represents an object on basis of a convention, e.g. street signs, characters in musical notation, letters standing for chemical elements.

Synecdoche - part of something represents the whole, or vice-versa (e.g. crown – kingdom).

Text is a term referring to written or spoken words or any other forms of expression, such as photography or video.

Trope is a figure of speech through which speakers or writers intend to express meanings of words differently than their literal meanings. In other words, it is a metaphorical or figurative use of words in which writers shift from the literal meanings of words to their non-literal meanings.

Verification – proving that something is correct. Verificationism is the philosophical doctrine that maintains that only statements that are empirically verifiable (i.e. verifiable through the senses) are cognitively meaningful, or else they are truths of logic (tautologies).

Video editing is the manipulation and arrangement of video shots.

Video game is a game played by electronically manipulating images produced by a computer program on a monitor or other display.

Video is the recording, reproducing, or broadcasting of moving visual images.

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